HYGEIA

A JOURNAL OF INDIVIDUAL AND COMMUNITY HEALTH

Published by the American Medical Association

Dec. 1924 **25 Cents**

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HYGEIA

A JOURNAL OF INDIVIDUAL AND COMMUNITY HEALTH

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VOLUME 2 DECEMBER, 1924 NUMBER 12

"WHO'S WHO" IN THIS ISSUE

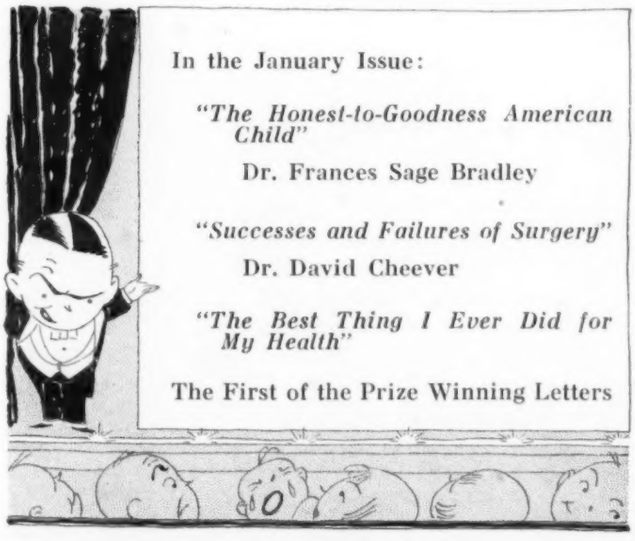
DR. WALTER C. ALVAREZ, in the leading article of the month, upsets some long cherished theories on constipation. Dr. Alvarez and Dr. B. L. Freedlander of the University of California Medical School recently made some interesting tests on a group of students to determine how long food stays in the body. Comment on their findings was made in the editorial columns of the October HYGEIA.

KONRAD BERCOVICI is a name well known to readers of current magazines. Himself a gypsy, Mr. Bercovici writes of gypsy life with a great deal of feeling. With the holiday and potted primrose season almost at hand, DR. EDWARD F. CORSON'S little warning about the primrose will be appreciated. Dr. Corson is a practicing physician.

DR. DOUGLAS A. THOM is connected with the only clinics in the world that are solely interested in the mental life of children of preschool age. These six habit clinics are in various districts of Boston. DOROTHY WALTON BINDER is a free lance writer with a special interest in the health problems of organized labor.

RUTH T. LEHMAN, who helps the housewife plan her Christmas dinner, is a specialist on menus. She is connected with the school of education, University of Chicago. DR. JOSEPH HERZSTEIN was formerly secretary of the New York state commission on ventilation. Dr. C.-E. A. Winslow was chairman of the commission and other members were Dr. Frederic S. Lee, Prof. Edward Lee Thorndike, Dr. James Alexander Miller, Prof. Earle B. Phelps, D. D. Kimball and Dr. George T. Palmer.

DR. BERNARD FANTUS, a familiar contributor to HYGEIA, is a teacher and writer on medical subjects. DR. HAROLD A. ROSENBAUM gives considerable attention in his medical practice to the dietary problems of children.



In the January Issue:

"The Honest-to-Goodness American Child"

Dr. Frances Sage Bradley

"Successes and Failures of Surgery"

Dr. David Cheever

"The Best Thing I Ever Did for My Health"

The First of the Prize Winning Letters

Contributions to HYGEIA *are considered, and, if accepted, paid for. Stamps for the return of unaccepted manuscripts should be enclosed. All communications should be addressed to* HYGEIA, *535 North Dearborn Street, Chicago, Illinois.*

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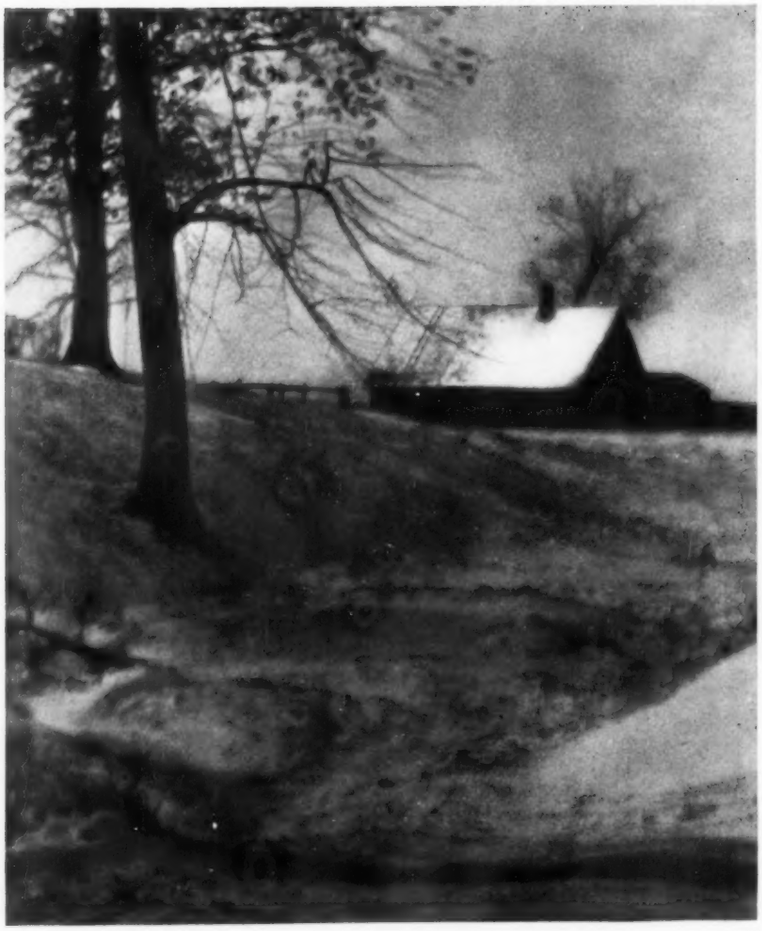


What Do You Do for Constipation?

WALTER C. ALVAREZ

JOSH BILLINGS used to say that it is better to know only a few things than to know so many that aren't so; that seems to be particularly true in the case of constipation.

Most men and women have been led to believe that in order to be healthy they must have at least one bowel movement a day. Now that may be true for many people, perhaps for the great majority of them, but there are thousands of women and some men who are perfectly healthy and comfortable with a movement once every three, four, five, six or more days.

Some of these people have been born with large, roomy colons—the large bowel—that take days to fill up and overflow; others eat so little that it takes them a long time to accumulate enough refuse for an excretion; others have what is called a "hungry colon," that is, a bowel that is so economical and efficient that it hasn't much material left over when it gets done.

Obviously these men and women should not attempt to have a movement every day. Nature did not intend that they should, and if the doctor meddles by giving them purgatives and rough diets, their last state may be worse than the first.

How Long Food Stays in the Body

Another great misconception is the idea that the residue from any one meal normally leaves the body within twenty-four hours. Recent research work on scores of normal students at the University of California shows that there are only a few men and women whose bowel excretions contain most of the residue from the meals of the day before, and they all have abnormally large, badly digested excretions. On an average we find some 15 per cent. of the residue at the end of the first day; 40 per cent. more on the second; perhaps 15 per cent. on the third, and from 5 to 10 per cent. on the fourth and fifth. From 90 to 100 per cent. thus comes through by the end of the week. A number of the students took from a week to ten days to pass 50 per cent. of the residue from one day. Their excretion showed signs of an excellent digestion and they seemed to be perfectly healthy in every way.

In several instances, it was found that laxatives or spontaneous attacks of diarrhea emptied the large intestine so thoroughly that for several days afterward there were no bowel actions. The colon had to fill up again to a certain point before it could overflow. This is an important practical point, showing that when we have purged ourselves and have produced excretions larger than the normal spontaneous ones, we must not expect to have another for two or three days and we should not immediately resort to further purgation.

If people who think they are constipated would only wait for a few days they would often find themselves normal again.

Another popular idea today is that it is better to stuff ourselves with the most indigestible foods that we can find, such as bran, greens and fruits with skins and seeds—so-called nature remedies—than to take a small cascara pill. Actually, the rough, avowedly indigestible diets which are now given even to chronic invalids give rise to a great deal of gas and intestinal distress. If the patient has the digestion of an ostrich, such diets may work splendidly but if his intestinal tract is weak or handicapped in any way, it will break down.

Oftentimes a little chemical stimulus to bowel action is better than a big, coarse, mechanical one. The craze of late has been for "nature remedies." Will some philosopher tell why a prune off of a tree in San Jose is a nature remedy and the decoction of the bark (cascara) of another tree in the same town is not. For that matter, why is calomel obtained from a mine in the same neighborhood still less a "nature remedy"?

Enemas Not Dangerous

Another statement that seems unfounded is that enemas are dangerous and harmful. Especially when a physiological salt solution (two quarts of water with a rounded tablespoonful

of table salt) is used, a solution with the same strength as blood—I cannot see how any harm can be done, and I have never seen a case in which it could be claimed that it had been done.

Actually, an enema is the most logical remedy for constipation as it cleans out the large bowel where all the stagnation takes place and it does not upset 20 feet of small bowel where stagnation practically never occurs.

The man who has headache, dopiness or dizziness when he is constipated is not necessarily being poisoned by some substance which is being reabsorbed from his bowel. The idea of intestinal autointoxication is one of the oldest in medicine, and it has always had a strong hold on the mind of both physician and public because it seems so rational and so obviously true.

Many doctors actually believe that a number of diseases like high blood pressure, rheumatism, epilepsy, insanity or Bright's disease, are due to intestinal poisoning, and thousands more use this diagnosis simply as a cloak for ignorance. Instead of examining a patient carefully to find out what he really has, they tell him he has "autointoxication."

Unfortunately, the patient is generally satisfied because in every newspaper and magazine he reads of the terrible results which will follow if he doesn't take some quack's "internal baths," or if he fails to buy so and so's laxative pills, patented syringes, paraffin oil, yeast, sour milk, agar or bran.

Intestinal Infections

I do not deny the possibility that such a thing as intestinal autointoxication exists. Sometimes there must be opportunities for such poisoning. Highly toxic substances formed outside the body can go through the wall of the digestive tract and can injure us. Children seem often to be severely poisoned and even killed by substances formed in their bowels. These children, however, have diarrhea and there is much evidence accumulating to show that they are poisoned and killed not so much by chemical toxins as by living bacteria which go through the intestinal wall and into the blood stream.

Such mild generalized infections arising in the digestive tract probably occur in adults and may account for a good deal of illness. As one would expect, these infections are most likely to take place with diarrheas or after purgation, when the intestinal mucous membrane of the lower bowel is irritated and below par, and when the fluidity of the contents and their richness in undigested food remnants cause an enormous increase in the growth of bacteria.

With constipation, the excretions are so solid and dry and lacking in nutriment that most of the bacteria die out. Furthermore, it is obvious that little absorption can take place from solid masses of bowel residue as compared with what might take place from liquid material. For this reason many students of the subject have said that we are safest from autointoxication when constipated.

The main thing that saves us from such trouble is the fact that few poisons can pass unchanged from the intestine into the blood. Most of them are stopped or digested in the bowel wall and nearly all of the rest are wholly or partly destroyed by the liver, which strains all the blood from the digestive tract before it can pass to the heart. It is this mechanism which makes it possible for us to drink with impunity things like rattlesnake venom and lockjaw toxin.

Before we can know anything definite about autointoxication, we must find some substance which is formed in the bowel which can get unchanged through the mucous membrane, the liver and the lungs; which is absorbed in amounts sufficient to produce symptoms, and which can be shown to produce the symptoms ascribed ordinarily to autointoxication. Actually no such substance has yet been found although much research work has been done, and there is no real evidence as yet that constipation ever produces diseases like high blood pressure or rheumatism.

There is no question that many of us feel poisoned and miserable when we are constipated, but the significant thing is that the symptoms almost always clear up instantly after a bowel movement. When such prompt relief is experienced, we can be sure that there has been no toxemia because in cases of toxic poisoning relief comes slowly and only when much of the poison has been excreted in the urine. We need only to remember that we do not sober a drunken man by taking away his flask of whisky.

But the symptoms are real; how are they produced? It has been shown by a few investigators that these symptoms are produced mechanically by pressure on the nerves in the region of the lower bowel. They are just as marked when the patient's large intestine is stuffed with cotton as when it is full of undigested material.

Should Acquire Good Health Habits

The lesson which should be driven home to all of us is that although it is well to emphasize the advisability of securing regular bowel movements by acquiring good habits, heeding the calls when they come, eating fruit, prunes, etc., doctors have no right to scare people out of their wits with the bugaboo of autointoxication; they have no right to ascribe many diseases to it, and they have no right to meddle with the intestinal habits of some people who are doing just what the good Lord intended that they should do.

Gypsy Health

KONRAD BERCOVICI

OUR conceptions of morality are intertwined with our ideas of cleanliness. What is clean is considered moral; what is moral—clean. In all languages there is no stronger insult than "dirty." It is the greatest insult; our enemies are "dirty this and that." The people we are friendly with are clean. It has been so in antiquity; it is so now.

Even our conception of beauty is based fundamentally on cleanliness. We speak of clean lines, of clean limbed men and women. We simply cannot conceive of anybody or any action that is unclean and moral, unclean and beautiful.

Perhaps the main reason the gypsy has been so persecuted the world over is the impression of uncleanliness he gives on first appearance. The reason for our discrimination against people of different color than ours is based on the fact that you cannot see at a glance whether they are clean or not. I remember when I, as a child, saw my first Negro. I was wondering why he had not washed.

Gypsy Is Clean

In spite of all appearance to the contrary, the gypsy is a very clean individual. It is, of course, impossible to keep scrupulously clean, in the civilized sense, when on the road traveling in carts and wagons as gypsies do, and camping on the roadsides. The best of clothes would soon be cracked with dust and mud. But I have yet to know a tribe of gypsies that would not wade in the first brook, the first river they met, even when the temperature was below an agreeable degree.

The tent poles are no sooner fixed than the kettle is on the fire, not for food, but for hot water to wash, first the children's heads and those of the women and men afterward. Whatever the overclothing may be, in whatever condition it may appear, underneath, the average gypsy wears clean linen on a clean body.

Some time ago while dining in one of New York's best restaurants with a group of writers and a gypsy young lady just out of college, one of the men asked the young lady:

"What about the cleanliness of the gypsies? Is it not a fact they are unspeakably dirty?"

To which the young lady replied: "I wonder what you would think of civilized cleanliness if all the ladies and the gentlemen here were suddenly to take the shoes off their feet! I wonder whether you would then have the courage to ask what you have asked!"

I have slept in gypsy tents and eaten at their tables, and I know. They eat with their fingers; because their fingers are cleaner than the forks and spoons at some restaurants. And their bare feet, free from shoes and stockings, have been cleansed by the sun and the wind. As to their teeth—well, no gypsy ever goes to a dentist. They used floss before the dentists had thought of it. I have known old men of eighty who still chewed the bone of a cutlet like young wolves.

Water Is Chief Remedy

The gypsy believes in the curative qualities of water. When a child is born it is immediately immersed in running water. Before it is given to the mother's breast, forty-eight hours after its birth, it is given water. When some one is ill, he is given water—cold water, hot water, water all the time, water against constipation, against headaches, as a cure for rheumatism and all old-age complaints.

When a man is over fifty they say: "He is drinking old-age water."

They use water to cure ills of horses and cattle and sheep. Even their incantations for happiness, their love potions and hate potions are all water. Naturally a deal of hocum goes with it. Water is their religion, their witchcraft. Many a gypsy has told me the reason gypsies move from one place to another is because they are going to better and better waters—to swiftly running waters.

The gypsies use no drugs of any kind; not even herbs, dried or boiled. Next to water, their other remedy is fat—lard, grease and butter. They apply that to wounds after washing them. "Water, grease and sunshine" begins the gypsies' prayer to Tchiuma, the mother of the world.

It is inconvenient to realize the fact that because of their innate cleanliness the gypsies are the longest lived race in the world. Their

infantile mortality is so small as to be almost nil. All gypsies are born to live and to get old. When a child is born, the oldest woman looks at its mouth. The gypsy is convinced that a good mouth, broad and deep gummed, and a wide tooth mean long life.

"When Tchiuma does not want a child to live she does not waste strong teeth on him." Bone is the gift of the mother of the world, and as she does not have overmuch she does not waste it.

How different is Spain, where I saw an undertaker's billboard reading as follows: "If you let us bury one of your adults we will bury one of your children free of charge." Children of no other race could thrive under the conditions of the gypsy children. Exposed to heat and cold, dragged from one place to the other, from one climate to the other, with dust and mud and wind continually beating against their faces, other children would soon perish. Neither could gypsy children live if not for the cleanliness of their parents.

In Hungary and Roumania most of the wet nurses of the wealthier class are gypsy women. The child is given in her charge and she brings it up. She feeds it from her clean breasts and gives it water, water all the time.

While a gypsy woman is nursing her child, especially during the first six months, her husband lives away from her. In many tribes he takes another wife unto himself for that period, and the first one is required to treat her as a sister.

Sickness Is Great Crime

Venereal diseases are almost unknown among gypsies. And tuberculosis strikes only those who live in towns "because they don't get freshly running water," the gypsies say.

If we consider that the conception of morality is based on our ideas of cleanliness, the gypsy is the most moral man. And he is—clean of cant and learned book wisdom of this and that and the other thing.

A long lived race is a clean race, a moral race. The greatest crime in the eyes of a gypsy is sickness. The greatest virtue is health. The only form of illness which calls for any sympathy is broken bones, and almost every tribe has a bone-setter. The fame of some of these bone-setters travels very far. Many a one is searched out in the wilds, thousands of miles, to the sick bed of some leader. In all my experience I can remember only two gypsy cripples; an old man whose broken arm had not knitted well, and a small child whose leg had to be amputated because of a dog's bite.

As to childbirth—no gypsy woman gives it a thought. It is—painless.

THE HEALTH OF THE GYPSY

A Comment by Dr. Morris Fishbein

IT IS well known that Mr. Bercovici has an intense and kind sympathy for the gypsy tribes. No other writer today so well presents the romantic aspects of gypsy life, and he has perhaps a kindly blind spot for some of the defects of gypsy existence.

It is well first to differentiate the true gypsy from the nomadic and itinerant wanderers who adopt that mode of existence as simply an easy method of living off the community. In other words, the true gypsy is not to be confused with the genus "hobo," whether man, woman, or child.

There can be no doubt that the outdoor life, once the individual is hardened to its rigors, is conducive to healthful existence and longevity. However, one hesitates to adopt at once the suggestion that eating with the fingers is more sanitary, at least from a bacteriologic point of view, than eating with the knife and fork. The prevalence of hand to mouth infections, as demonstrated by bacteriologic studies, is sufficient warrant for warning against any further possibility of carrying infection from contaminated hands to the mouth or to the nose.

Hygeia has preached constantly the doctrine advocated by Mr. Bercovici and the gypsies of much water inside and outside the body as a preventive of common disease.

All gypsies look old; in fact, outdoor life and

nomadic existence tend to give the appearance of longevity, but unfortunately by the very nature of things there can be no statistics as to the average length of life of the gypsy. On the other hand, it is quite likely that the difficulties of gypsy life are such as to kill off the weak child early in its existence and to cause the perpetuation of the strong and hardy. Here is a sort of natural selection of the type suggested by Darwin which produces the survival of the fittest and a type which is hereditarily strong.

Sickness among the Gypsies

It is probably true that tuberculosis is but infrequently found among gypsies. The type of existence, including good simple food and lots of outdoor air and sunshine, constitutes the very measures which are most commonly advised in the prevention and cure of this disease.

On the other hand, venereal diseases tend to spread by exactly the kind of loose life that the gypsy leads. He is bound by no considerations other than the small community in which he lives, and constant traveling must bring him in contact with infection. Furthermore, unless the moral tenets of the gypsy tribe are such as to overcome the exceedingly intimate contacts of the method of living, it would be quite unreasonable to believe that venereal disease is not common. Here again there can be no accurate statistics, and, therefore, no possibility of determining the matter definitely.

The noticeable absence of cripples among the gypsies is again explained by the type of existence. Obviously the cripples will be left behind in some place of permanent residence, since they would constitute a burden on a traveling tribe. The history of early nomadic groups indicates that it has always been the custom to leave the weak, the crippled and the deficient in permanent residences in some established community.

The painlessness of childbirth is a relative matter. Stoical people tend to show pain to a lesser extent. No doubt, many a gypsy woman undergoes the same travail as is endured by her more established sisters. The matter of pain in childbirth is largely dependent on the size of the pelvis, the size of the child, the nervous constitution of the childbearing woman, and the kind of treatment given by the attending physician.

How I Keep Fit in Winter

MUSCLES flabby, cheeks pale, appetite waning, sleep difficult, energy lost—that is a picture of the man who seeks out "spring tonics" to build him up after a long and exhausting winter.

The wise person needs no spring tonic; he keeps fit all winter. HYGEIA, in its February prize letter contest, wants the wise ones who keep fit to tell the "spring tonic" fellows how they do it.

For the three best letters on "How I Keep Fit in Winter," cash awards are offered as follows:

First prize letter, $25.
Second prize letter, $10.
Third prize letter, $5.

[Additional letters considered worth publishing will receive recognition by a year's subscription to HYGEIA.]

Any individual, young or old, is eligible for the contest. Letters must not exceed 500 words in length. Write legibly on one side of the paper only. Letters should reach the contest editor on or before December 20, 1924. The prize-winning letters will be published, but the writer's name will be withheld upon request.

EXPLOITING THE

II. Type of Literature on Which "Physical

This is the second of a series of articles on the peculiar cults and faddists that exploit the health interest. The first article, dealing with the type of advertising appearing in *Physical Culture,* was published in HYGEIA for November. Future articles will concern other exponents of queer health fallacies.

THREE types of persons are interested in health: those who are well; those who are sick; and those who are well but who think they are sick. In these times, the interest of those who are well is present, albeit apparently somewhat slight and casual. The interest of those who are sick is intense, but transitory; when they are well their interest tends to lessen.

The interest of those who are well but who think they are sick is constant and pitiful; they form the substance on which the "patent medicine" mongers have thrived since time immemorial; they constitute, in large part, the great audience for false prophets of health, as well as for those who are attempting to give honest information about the body and its care in health and in disease.

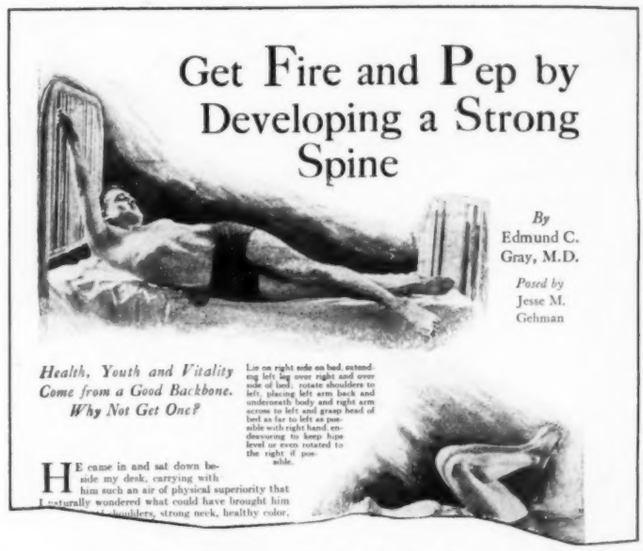
With this introduction, let us consider some of the medical articles appearing in what is alleged to be a non-medical periodical, namely, Mr. Bernarr Macfadden's *Physical Culture,* and the type of fiction and general literature issuing from the Macfadden press. If Mr. Macfadden were to content himself purely with preaching the gospel of simple diet and adequate exercise, one could have no fault to find with him, except that he utilizes the erotic appeal in his teachings.

Salaciousness of Macfadden Periodicals

The manner in which the sex appeal is used by the Macfadden periodicals has been duly criticized by numerous observers, and perhaps nowhere else so well as by N. H. Bowen, in a recent discussion in the Detroit *Saturday Night.*

Mr. Bowen says, in a consideration of *True Story* and *True Romances,* particularly, as well as the *Metropolitan* and others of the Macfadden string: "The important thing to note is that in every one of these stories the suggestion is of something relative to sex; in fact, these two magazines reek of sex."

It needs no reading of the Macfadden publications to convince any sound observer that the appeal of all of them is sexual and erotic. The covers, invariably in the gaudiest of colors, are devoted to pictures of women in various stages of nudity, always sufficient, however, to avoid


Get Fire and Pep by Developing a Strong Spine

By Edmund C. Gray, M.D.

Posed by Jesse M. Gehman

Health, Youth and Vitality Come from a Good Backbone. Why Not Get One?

Lie on right side on bed, extending left leg over right and over side of bed; rotate shoulders to left, placing left arm back and underneath body and right arm across to left and grasp head of bed as far to left as possible with right hand, endeavoring to keep hips level or even rotated to the right, if possible.

HE came in and sat down beside my desk, carrying with him such an air of physical superiority that I naturally wondered what could have brought him

Here one of Macfadden's medical contributors puts emphasis on the spine.

conflict with the postal authorities. The illustrations place emphasis on the beauties of the salacious and the cabaret, rather than on the higher types of art which have less sex appeal. Even the illustrations of the crude stories that form the basis of the Macfadden literature are the old male and female struggle type or the slow fadeout rigid clasp that featured the movies in their earlier and rawer stages.

The fiction of the Macfadden periodicals is quite frequently of the so-called confession type; in fact, *True Stories* and *True Confessions* contain nothing else. Perhaps these confessions may be true, but if they are, their appeal lies, not in their truth or in any moral lesson that they may teach, but in their essential suggestiveness. Of literary value they have none, and their duration is as evanescent as the paper on which they are printed.

However, we are concerned here not so much with the exceedingly low scale to which the Macfadden literature is pitched, as with the false campaign of health which his periodicals promote.

Macfadden's Platform

It does not suffice Mr. Macfadden to prove that good health may be achieved through proper diet and proper exercise; he seems to feel that in promoting these disiderata he must attack those phases of the scientific care of the body that lie within the purview of the scientifically trained physician. In *Physical Culture,* he

HEALTH INTEREST

Culturists" and Macfaddists Thrive

attacks primarily those who use methods and knowledge which are not available to him through the fact that the law is inclined to protect the public by guaranteeing to some extent the sanctity of the M.D. degree.

In his campaign, Bernarr Macfadden aligns himself with the borderline cultists that oppose scientific medicine and devote themselves to the promotion of some single conception of disease causation, prevention and treatment.

One finds him promoting actively the interests of the manipulative cults, including chiropractic and osteopathy; of the Abramites, with their fantastic electronic conception; of the naturopathic cult, with its emphasis on barefoot walking in the morning dew; of colonic flushing and vegetable diet; of the antivaccinationists and antivivisectionists; of the fanatical groups that feel that their personal beliefs are more important than the good of the community; and, indeed, of any of the extraordinary fads which have risen for a moment above the horizon of medical practice only to sink rapidly into oblivion.

It would be possible to go through previous volumes of the health faddist's monitor and to select therefrom articles showing how Mr. Bernarr Macfadden has lent himself to the promotion of dozens of now discredited notions. This, however, is unnecessary at this time, since Macfadden has himself indicated his willingness to promote every new notion—it would be beyond the mark to call them ideas. It is, moreover, necessary only to refer to a few of the recent issues of *Physical Culture* to see the type of science which Mr. Macfadden is willing to accept.

In his July number, one finds a defense of the now completely discredited Albert Abrams, by the completely deluded Upton Sinclair; a de-

Claims Vaccination a Filthy Superstition

By H. Bonnell

Syphilis, Cancer and Diphtheria Are After-Results of Vaccination, This Authority Claims

Mr. H. Bonnell, who declares that vaccination is one of the curses of the age

What the Osteopaths Showed Them at Kirksville

Marvels and Near Miracles in Effecting Cures Were Shown in Cases Where Medical Doctors Have Cried Out, "It Can't Be Done"

By Ray G. Hurlbert, D.O.

That Troublesome Prostate Gland

Can I Rid My System of Alcoholic Poison?

And Other QUESTIONS FROM HEALTH SEEKERS

Conducted by Edmund C. Gray, M. D.

The Menace *of the* Medical Autocracy

Appalled at the Increasing Public Approbation of Drugless Methods of Healing, the American Medical Association Is Trying to Drive All Drugless Healers Out of Business and Destroy Personal Freedom of Thought and Action in Matters of Health

By Frederick W. Collins, M. D.

I Fasted Sixty Da... Gain

For Two Months I Taste... and My Health Was ...

By the Rev. Robert L. (Bob...

Newsboy Evangelist and Kansas ...

I BELIEVE I am the only person in the whole world who ever went on a "hunger strike" for sixty days to improve my health.

Everybody eats too much—particularly of the things they should let alone.

Last year, finding that I was growing old beyond my years, that my stomach was "misbehaving," and that my general physical condition was not what it should be, I determined upon a thorough house-cleaning.

I wasn't ready to become a chronic invalid.

And, as I had planned much work which would require a long time to accomplish, I desired to live for many more years.

Ignorant Specialists

By Bernarr Macfadden

THIS is the age of the specialist.

Those who confine their studies to a particular part of the body become familiar with every detail in reference thereto.

Because of this superior knowledge they should be able to diagnose, advise and treat that part of the body more intelligently than the ordinary practitioner.

doctors seem to know how to accomplish this by methods which are dependable.

Acute and dangerous cases of blood-poisoning such as that which carried away the son of our honored President, Calvin Coolidge, require similar meth...

The alimentary canal is no... source of nourishment ... testines, especially ... termed the ...

doubt. Surely the speaker was not in earnest for, despite the frost in his hair and beard, his manner, carriage and physical appearance made him seem more like a man of forty than his actual seventy years.

Dismissing the scattered manifestations of perplexity with a deprecatory gesture, the priest continued:

"Yet I couldn't believe that my days of usefulness were over. Surely medical science could do something to revive my failing ... and probing my ... I invoked the ... ral ...

million people in this ... turned from the medi... drugless methods of ... maintaining health. ...

Specimen headings from articles in Macfadden's "Physical Culture"

A group of Macfadden covers. Note the featured articles; "Physical Culture" contains "The Romance of an Old Maid" and "The Medical Autocracy." Note also the appeal to purchase by nudity.

fense of naturopathy, by Bernarr Macfadden; and a defense of the unestablished views of W. H. Bates, who believes that it is possible to train a deformed eye to see without glasses, again by no less an authority than Bernarr himself.

There is also an article showing that bobbing of the hair makes women bald, without the slightest basis in scientific proof—certainly with no actual evidence.

Moreover, two issues contain a symposium devoted to the triumphs of osteopathy, without any recognition of the fact that it never has been shown that the very conditions which form the basis of osteopathy actually exist.

Macfadden's Inconsistency

With a peculiar disregard of his own constant and unwarranted attack on medical science, Mr. Macfadden employs, to bolster his views, such physicians as are willing to take a few dollars for writing articles for the Macfadden magazines.

It should be obvious to any logical minded man that a physician who has even an ordinary ability to interpret what he reads will know that the Macfadden periodicals are devoted largely to an attack on scientific medicine, and to discrediting not only the modern treatment of disease but also the campaigns for the prevention of disease carried on by scientific medicine. These campaigns, history shows definitely, have cleared up the plague spots of the world and resulted in the saving of millions of lives wherever they have been applied. It should be obvious to any physician that the lending of his name and his M.D. degree to the periodicals of Mr. Macfadden constitutes a definite departure from his scientific training, and certainly from the ethical ideals which were conferred on him with his medical education. It is perhaps the boast of Mr. Macfadden that he has been able to secure a few—fortunately only a pitiful few—physicians who are willing to contribute to his pernicious propaganda.

In the number for July, one finds articles by one Edmund C. Gray. It is true that Edmund C. Gray has a medical degree. What other qualifications he may have are not apparent from anything in his history. He was graduated, it appears, from the Bennett Medical College, Chicago, in 1914, apparently without preliminary education in a college or university. He was licensed to practice in Illinois in 1916, and in Connecticut in 1920. His name appears in no medical directory until 1918, so that his movements in the interim are unknown. However, in 1918 he was at Greensburg, Ind.; in 1921, at Bridgeport, Conn.; in 1923, at Stamford, Conn. Possibly his practice was not extremely successful in any of these places; and, apparently, at present he is devoting his time primarily to enlightening the readers of the Macfadden periodicals.

In the July number there appears also an article by Lee Alexander Stone. To this article the blurb writer of *Physical Culture* appends a note that Lee A. Stone is a surgeon in the United State Army with the rank of lieutenant-colonel. In the meantime, the Surgeon-General of the United States Army has taken pains to inform physicians that Dr. Stone is not at this time in any way connected with the medical department of the Army, but that he holds his rank in the Military Intelligence Reserve Corps.

There appear also in the July issue articles by Dr. Frank Crane, who, fortunately, is not a medical doctor but a reverend, and not a practicing reverend but a syndicated producer of trite aphorisms for daily papers and Babbitt-hunting periodicals. He is the apotheosis of the Pollyanna school of thought.

The August number contains articles by Dr. Ray G. Hurlbut, an osteopath; again Dr. Gray and Dr. Crane. And these, together with "Drs." Edwin C. Bowers, Graham Disbrow and Frederick Collins, who are not physicians at all, except through the degrees which are conferred on them by *Physical Culture*, seem to constitute the medical staff of Mr. Macfadden's periodicals of health instruction.

Macfadden's Defense

Those who have, on occasions, looked into a Macfadden periodical turned but a few pages until they came upon a photograph of the "Bare Torso King"—to confer on him the title originally conferred by the Detroit *Saturday Night*.

Here he stands, almost in the garb with which nature clad him, a majestic figure with lungs inflated and pompadour defying the world. His skin, if we are to believe his own accounts, is full of vigor and strength. But apparently the attacks that have been made on his motives, if not on his facts, have been sufficient to pierce even a skin strengthened by all of the methods known to the apostles of physical culture.

In particular, Mr. Macfadden seems to be worried by an editorial which appeared in the *Ladies' Home Journal*, in which the editor of that long-established periodical called attention to the evil that is being spread by sex publications. Mr. Macfadden's defense is to claim that many of the great health campaigns for which the *Ladies' Home Journal* is renowned were his own innovation. With colossal impudence he states that *Physical Culture* began twenty-five years ago to expose the patent medicine fakers, and that the *Ladies' Home Journal* took up the fight only after *Physical Culture* had started.

And this in a periodical which today reeks with the advertisements of nostrums and fallacious health systems!

He claims further that *Physical Culture* originated the campaign against venereal disease. And this in a periodical which by its refusal to recognize the scientific facts concerning venereal disease may contribute to the spread of these diseases.

It is the belief of at least many editors that the Macfadden periodicals, with their sex stimulation and appeal, promote unchastity. The refusal to recognize that such conditions as gonorrhea and syphilis are caused by definite bacterial and parasitic organisms will help to prevent the dissemination of knowledge as to the way in which these diseases may be prevented through the use of antiseptic substances. It is this Macfadden who claims that he has contributed greatly to the war on venereal disease!

What shall one say of a man printing such a series of periodicals, filled from cover to cover with literature that is primarily sex stimulating in its appeal, when one learns that he has "appointed a board of ministers composed of representatives of all the various prominent creeds, whose duty it is to examine in manuscript form all stories that are questionable in their moral influence."

Shall one criticise more Mr. Macfadden or the ministers who have lent themselves to his exploitation? And if the ministers referred to have passed the type of literature that appears in the most recent numbers of such magazines as *True Confessions, Dream World into the Land of Love and Romance,* and *Dance Lovers,* with a leading article by Byrne Macfadden concerning the manner in which she learned to "shimmy" from Gilda Gray, what a peculiar lot of ministers Mr. Macfadden must have assembled!

It was the view of the intelligent Greeks that the human body well taken care of is a holy and spiritual thing. The laws of health and hygiene which they promoted were such as bring the body to a high state of perfection and discourage immodesty and salaciousness in relation to health. The Macfadden gospel is essentially an appeal to a large minority of persons whose eyes are aroused by the flash of nakedness or whose weakened wills succumb to every new health fad. He has taken what should be a beautiful search for health, for vigor and for strength and made of it an ugly and discouraging thing to every right-minded individual.

The Ungrateful Primrose

EDWARD F. CORSON

"YES," said the old florist, "we had to give up raising the *obconica*—seems it poisons some people. I never had any trouble with it myself, but it got so my daughter couldn't walk by the plants without her eyes swelling up, that is, after it once started to bother her. She handled them for twenty years without noticing anything and then it came out like a rash on her face and hands. For a long time we didn't know what was doing it."

The tale of the half frozen snake, which, warmed at the fireside of the husbandman who found him, thawed out and bit its benefactor, parallels in all save intention the story of the primrose's career.

One of the most popular of winter potted plants, the primrose delights the eye. Its luxuriant green foliage contrasts with a central cluster of bright blooms, commonly of a delicate pink or purplish shade. For the indoor trade it is usually planted at a suitable time so that it will bloom from Christmas until the middle of March. It is a plant that can be much "fussed" over if one desires it. There is a comparatively rapid putting forth of new leaves and a withering of old ones. As new blooms appear in the center, the old stalks must be plucked off to preserve the best appearance. Almost every day one can "primp" it a little if interested in growing things, and this practice is particularly tempting to some winter-bound individual drawn to the bit of green and lilac in a cold, white world.

Frequently the potted primrose serves as a gift at the holiday season or to an invalid, and then what happens? Probably nothing in the vast majority of instances, but certain individuals are made quite miserable in return for their care and attention to the primrose. For obvious reasons the majority of the sufferers are women, often convalescents, to whom the plant is intended to bring cheer instead of additional trouble.

A tingling or burning is noticed, most often on the hands, the fingers especially being liable to show the first signs of irritation. Soon itching follows and little red spots or larger areas appear with swelling accompanying them. This last manifestation is most pronounced where the skin is sensitive and loosely attached to

underlying parts, as around the eyes; frequently the face and neck also exhibit signs of poisoning. Itching becomes intense and blisters form on the reddened areas, often in little lines where the leaves have scraped across the skin. If exposure to the plant is persisted in, there is finally present the picture of a reddened, oozing and crusted, intensely itchy eruption of the general type we call an eczema.

It is frequently a mysterious ailment to the patient and to the attending physician. "Too much acid in the system" is heard from the lips of both patient and doctor. Tomatoes, grapefruit, strawberries, rhubarb are removed from the dietary without effect or, with the hands wrapped in dressings and thus unable to touch the leaves, the change in food may be credited with the improvement. Once free of bandages and again in contact with the plant. the eruption at once returns.

Can Give Doctor a Clue

An observant and intelligent individual frequently will see the connection between plant and eruption and set the family physician on the right track if he has not correctly interpreted the appearance of the outbreak. The condition is by no means rare to members of the medical profession that specialize in skin diseases. But many cases may be unrecognized as such and ascribed by them to other irritating influences, such as strong soaps, chemicals or other poisonous plants.

An elderly woman, a housekeeper, was confined to her bed for ten days with severe bronchitis. On regaining her sitting room she found that her favorite primrose had been neglected. She spent an hour pruning and tending it. The next day her hands and face were extensively broken out and the itching was intolerable. Until then she had never been affected and it seemed probable that her debilitated condition had made her skin vulnerable.

A young woman had an inflamed nose, cheeks and upper lip with characteristics that made plant poisoning seem likely to be the cause. It was winter and she could not recall any association with plants. At a subsequent visit to the physician she said, "I find we do have a plant, a primrose. It stands at the telephone table and every time I am there I smell the flowers."

A lady of 65, a recluse, sent for the doctor to come to her home to treat the itchy red spots on her hands, particularly the left. The culprit, a very showy primrose, was within two feet of her while she told the story of her mysterious ailment. The leaves were lifted by upward pressure of the back of the left hand as the patient plucked off the dying leaves with the right.

The primrose leaf has a downy surface which, on close inspection, is seen to be due to numerous hairs. It is probably the acrid secretion of these hairs that is responsible for the skin irritation. The hairs are also found on the tall stalks that bear the whorls of small flowers.

There are numerous members of the primrose order and some others of them are poisonous too, but if we take the florist's advice and avoid the *Primula obconica* we are reasonably safe.

Connecticut Trains Healthy Teachers Only

GOOD health is compulsory in Connecticut normal schools. Every applicant for admission to a normal training college must pass a thorough medical examination conducted by women physicians employed by the state.

If the prospective student cannot pass the physical examination, she is either rejected or accepted on the condition that her defects be corrected in seven months' time.

The minimum requirements in health for entrance to the normal schools of that state are sound health and good physical appearance and presence. These two requirements are regarded as essentials, in the light of (1) the importance of health and good appearance to the success of the teacher; (2) the good effect a pleasing and healthy presence has on the pupils, and (3) the economy to the community.

Any marked abnormality or chronic disease is considered cause for rejecting an applicant. When any of the following defects or diseases are found, the applicant may be admitted on the condition that the defects or diseases be corrected or permanently cured within seven months after the opening of school: Functional disorders of the digestive system; disease of the skin; defective vision; occlusion of the nasal passages; disease or enlargement of the tonsils; dental decay of moderate degree or gum abscesses.

"I, Mary Jones, understand the above-named defects are frequently causes of poor health and will interfere with the performance of my duties as student and teacher. Therefore, I agree to have said defects corrected before April 1, 1925, or, failing to do so, I will accept my dismissal from the state normal school."

Such an agreement is signed by every student that is accepted on condition. The record of her physical defects is confidential and is disclosed only to parents or guardians in a letter announcing the result of the examination.

Mental Handicaps of Childhood

DOUGLAS A. THOM

The first society for the prevention of cruelty to animals was founded in 1823. The first society for the prevention of cruelty to children was founded in 1874.

THE present-day attitude of society toward the child has been brought about only by a process of evolution painfully slow. It has left in its trail a chapter in the history of mankind so blotted and smirched by cruelty, greed and neglect as to make the atrocities of war comparatively insignificant.

Economic stress, religious rites and strange superstitions, for ages past, have challenged the right of the child to exist. At both feast and famine the child has been sacrificed on the altar of ignorance, selfishness and barbarism. Up until the time of the Christian era no effort was made under the Roman law to prevent the disposition of the child by the father in any way he pleased; he could either sell or kill his children to suit his fancy. The Salic law imposed a modest fine (ranging from 200 to 600 sous) for the killing of a child, depending on the child's age and sex.

Children's Lives Were Cheap

During the fifth century, so many children were sold directly into slavery or stolen and sold indirectly for the same purpose that the pope (Gregory) considered it a matter of great concern. During the sixteenth and seventeenth centuries the utter disregard for the lives of children was appalling. They were abandoned in doorways, ash cans and sewers. Laws, drastic as they were, had little effect. As late as 1783, at the time of the famine in Japan, children were killed and devoured as food.

Within more recent years and in civilized countries, children have been deformed by cruel and painful methods and sent out to beg, just as today children are still being schooled in crime and sent out to ply their trade.

The industrial history of the child is hardly less barbarous. With the introduction of modern machinery and the early development of factories, child labor has been in much demand. It is not many years past since children were sent to work as early as the seventh year, toiling daily under the most insanitary conditions, virtually slaves to a cruel economic system—a source of cheap labor of which there was always an abundant supply.

There is still much to be done before we have emancipated ourselves from this social and industrial disgrace. Yet there is much reason for rejoicing as we take a glimpse of the present day status of the child in his relation to society.

In the great social scheme of things today the child has come to play an important part. Infants' hospitals, specially equipped, planned and administered, are being provided. Doctors and nurses, whose training and experience have been such as best to serve the needs of the new-born babe, are in constant attendance. Governesses and teachers are now waiting with knowledge and facilities for stimulating their intellectual and social interests.

Physical Ills Get Prompt Attention

Legislation regarding child labor is becoming more drastic and provides greater protection than ever before from the industrial slavery of years gone by. Special courts and judges with a well organized and humane system of probation give to the child certain privileges to which his immature years entitle him. Much time and attention have been given to devising healthy and interesting amusements for him. Books and magazines devoted to his interest are published in abundance. Plays are being written and presented for children, with the idea of interesting without overstimulating.

Never before has the child been permitted to take such an active part in the social, educational and economic plan of life.

For several years the intelligent parent has been intensely interested in the physical welfare of the child. Neither time nor money has been spared in order to provide him with proper nourishment. In some families carbohydrates, fats, proteins and vitamins are measured and dispensed with unerring accuracy. The slightest indication of gastro-intestinal upset is considered a danger signal and the physician is summoned.

The first teeth have hardly erupted before he is placed in charge of a competent dentist

whose every effort is directed toward their preservation—extracting, filling and straightening as the occasion demands. Slight imperfections in posture are cause for alarm, for does not appetite, digestion, and the general health depend on the way one holds his shoulders, to say nothing of social grace? The eyes and ears receive special attention and it is well that they should. The youngster is vaccinated and "Schicked" and an effort is made to immunize him against every infectious disease with known means of prevention. Such anatomical accessories as adenoids, tonsils and appendixes are disposed of if they threaten trouble.

In general, the up-to-date parent takes every precaution to safeguard the child against the imperfections of nature and the ever-lurking dangers of his environment. This is as it should be.

Child's Mental Life Is New Concern

It has been only within recent years, however, that we have concerned ourselves to any great extent with the mental side of the child's life. We entertained for a long time the idea that our responsibility ceased after we had applied all our medical tests and laboratory measures to determine the efficiency of the various bodily organs. We continued to entertain this idea in face of the fact that we found, all too frequently, a condition in which the organs were functioning with a high degree of efficiency, and yet the machine as a whole, that is the individual, was totally incapacitated to meet the demands of every day life.

Finally it occurred to us that it might be wise to treat the individual as such and perhaps make an effort to bring about environmental changes rather than concentrate our attention entirely on some particular organ or disease process.

It is by this new approach to the problems that confront the individual in his attempt to adjust himself satisfactorily to society's ever increasing demands that we may look for continued progress in our understanding of the motives for human conduct. Such insight and understanding are essential in any intelligent effort to guide the individual. It is quite as important in an approach to any and all of the great social questions, whether it be religion, education, crime or insanity.

The same absolute lack of understanding that brought about the persecution of the child retarded for years humane treatment for our insane, defectives and criminals, to say nothing of intelligent, scientific medical care. Only recently has the old uncompromising system, based upon a creed which demands "an eye for an eye and a tooth for a tooth" been swept away by public opinion and sympathetic understanding.

As a result of the change in attitude of society toward these two important groups of human beings—the child and the mentally sick—a new interest has arisen, that which is concerned with the mental life of the child. It is the logical sequence of events in the search for an explanation for human maladjustment, whether it be found in the nursery, the school, the factory, or the prison.

> The child for the first five years of life is an organism so tender, so easily broken, so easily damaged, that it needs all the care that first-class intelligence can give it.

Psychiatry, as a branch of medicine, deals with the mental aspect of the patient's life. It is interested in two year old Johnny's sullen, resentful attitude toward his new baby sister, his refusal of food, or perhaps, his temper tantrums. A few years later it may be his failure to get along at school or his inability to make friends that psychiatry is investigating.

When the boy is twelve or fourteen the ever-present problem of sex with its emotional upsets is a dangerous shoal on which many youths are wrecked. Later on, it is a question of vocational guidance, the kind of work best suited for John's personality and intellectual equipment.

We may skip a few years and quite unexpectedly find ourselves examining this same John at the county jail. Things have gone badly. He has not made good, has tried a short cut to prosperity, and failed. The law requires a mental examination to determine if he is responsible for the asocial act. Again, it may be in a psychopathic ward that we find him, afflicted with some social disease which has damaged his brain.

Perhaps it is the stress and strain of a comparatively simple existence that has been too much for this particular individual. Every man can withstand a limited amount of physical stress and mental strain before reaching the breaking point.

Must Guard Child's Emotional Life

Many and varied are the occasions for the psychiatrist to make contact with the individual but none so fruitful as those made during the early years of life. We have but to remember that just as the child has ears and eyes, teeth and tonsils, so he has instincts and emotions. He has an inherent hunger for self-expression which is constantly impinging on a code of laws of which he has no understanding.

Keep in mind the fact that the child has plans, hopes and ambitions. He has doubts, fears and misgivings. He has his joys and sorrows—some very slight and fanciful, others very deep and real. His emotional life is thwarted and gratified just the same as yours and mine.

If we are to regard the child as being equipped with a mechanism for experiencing the innumerable variations in feeling lying

between pleasure and pain, we must also concede his ability to express with more or less accuracy the proper emotional response. Parents should not express surprise, therefore, when they stimulate the painful emotion of jealousy in a child, to find that the child responds with anger and frequently with vicious acts toward the object of his jealousy. (This emotion is exactly the same as that which accounts for our most atrocious crimes.)

In the child of early years it is easier to interpret and understand the cause of reactions, since they are not colored by training, experience and education but are definitely instinctive in character.

> A thing once said sinks in the mind; that which has struck the brain often, from time to time, comes back again and in the breast of simple infancy, lives unexplained, full many a mystery.—Victor Hugo.

How prone we are to speak of the foolish fears in children. Yet they are foolish and unreasonable to us simply because of our limitations in understanding the experiences through which the child is passing or has passed.

Don't Ridicule Child's Fears

Children have only a few instinctive fears. Most of their fears are caused by some experience after birth. Intelligent parents no longer frighten children, either as a punishment or as a means of attaining desired conduct, yet few parents take the fears expressed by children seriously enough. They do not make inquiry into their cause or make efforts to eradicate them by careful explanation.

There is no emotion to which the child is more frequently subjected than that of fear. It can be aroused in such vague and intangible ways, is so closely associated with other emotions, and plays such an important part in the development of the personality of the child that it needs most careful consideration.

Two distinct types of fear exist: objective and subjective. The objective fears are more common, or, at least, they are recognized more frequently by the parents. Since it is usually not particularly difficult to determine their origin, these fears can be soon overdone. Fear of animals, soldiers, policemen, doctors, lightning, firing of guns, and of high places are usually based on some early unpleasant experience or on the hearing of some episode which aroused an unpleasant emotional reaction at the time.

Many children have a fear of anything that is strange or new but this reaction quickly passes away if they are allowed time to familiarize themselves with the object of their fear. Here they should be led not pushed.

Subjective fears, however, are more intangible and frequently it is only after a long, intensive study that the cause is determined.

Vague, poorly formulated ideas about death is the basis of more mental anxiety in children than is generally supposed. One youngster, 4 years old, entertained the idea that death meant being buried in a hole and held a very bitter resentment against his mother because he thought she was responsible for the death of his grandmother to whom he was very much attached. Another child, at 4 years, would get acute depressions and spend hours of suffering, the basis of which was the fear of being buried alive. The origin of this fear was a story of grave robbers cutting off a finger of a supposedly dead woman in order to get her jewels and of her return to life during the operation.

Childhood Prayer May Breed Fear

Not long ago a physician who sees many children called my attention to a fact which I have since verified, that fear is stimulated by the line in the evening prayer which is familiar to most children—"If I should die before I wake."

Rarely is a child's fear stated as the reason for bringing him to the mental hygiene clinic, but frequently it is found, during the study, to be the underlying factor in the child's trouble.

Don't minimize, criticize, or ridicule the fears of childhood. They are deserving of your intelligent interest and sympathetic understanding.

Part II of Dr. Thom's article will appear in the January issue.

High School Health Posters Entered in Hygeia Contest

Coleman Kubinyi, South High School, Cleveland.

Benjamin Shawcross, Frankford High School, Philadelphia.

Marian Husted, Glenville High School, Cleveland, honorable mention.

Paul Goodman, Fifth Avenue High School, Pittsburgh.

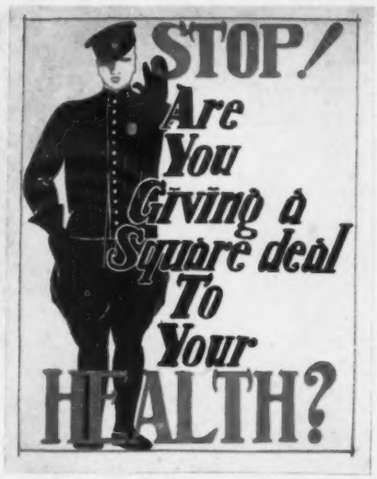
Ruth Barney, Oak Park and River Forest High School, Oak Park, Ill.

Ralph Hendrickson, Hyde Park High School, Chicago.

Frank Zaller, Gilbert High School, Gilbert, Minn.

George Davis, Crockett Technical High School, Memphis, Tenn.

Vernice Eckhart, Senior High School, Lansing, Mich.



Barbara Allen Hines, Peabody High School, Pittsburgh.

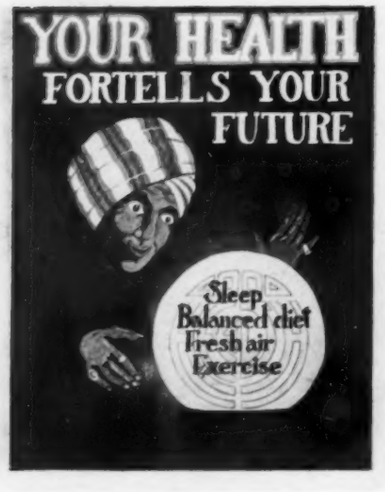
Sinclair H. Ross, South High School, Columbus, Ohio.

Alice Campbell, Schenectady High School, Schenectady, N. Y.

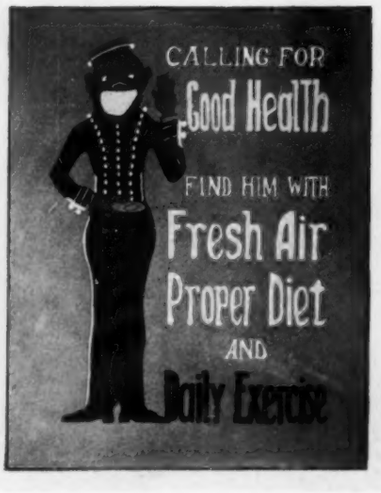
Grace Voelsky, Lakewood High School, Lakewood, Ohio.

Margaret Spear, Sacramento High School, Sacramento, Calif.

Florence Mulliux, West Allis High School, West Allis, Wis.



Robert Shepherd, Granite High School, Salt Lake City, Utah.



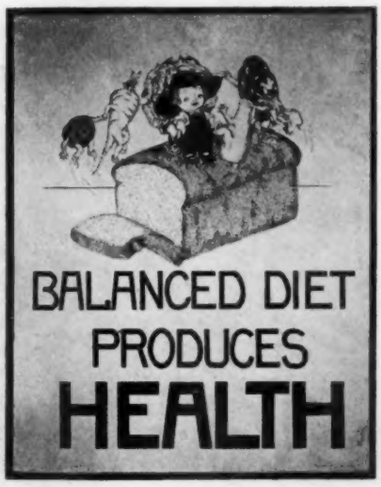
Brayton L. Dunham, Central High School, Lansing, Mich.

Helen Gerstenlauer, Washington Irving High School, New York City.

Zella Wilkins, Chico High School, Chico, Calif.

Edward Giebish, Riverside High School, Milwaukee.

George B. Brown, Yonkers High School, Yonkers, N. Y.



Eunice Smith, Wenatchee High School, Wenatchee, Wash.

Doris Bowen, Technical High School, Springfield, Mass.

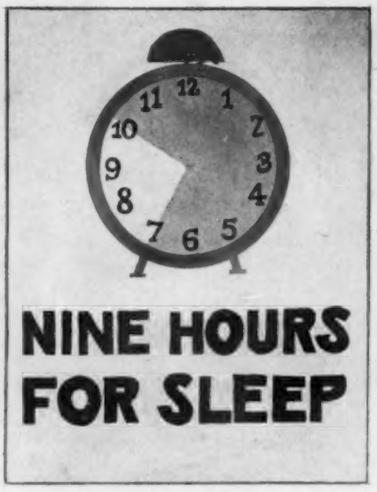
Maxine Spottiswood, Central High School, Grand Rapids, Mich.

Evelyn Hoey, West High School, Minneapolis, Minn.

Howard F. Shivers, Camden High School, Camden, N. J.

Jack Bailey, Shawnee High School, Shawnee, Okla.

Elaine Potter, Fargo High School, Fargo, N. D.



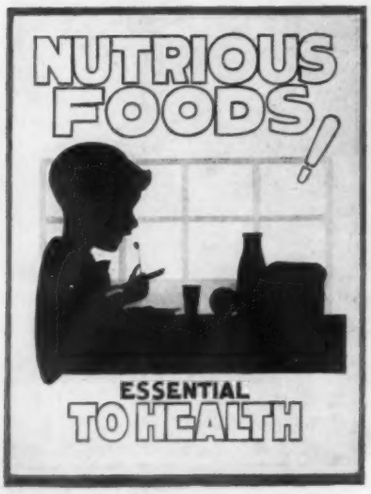
Marie Glenn, Kansas City High School, Kansas City, Kan.

Beatrice Bregel, Eastern High School, Baltimore, honorable mention.

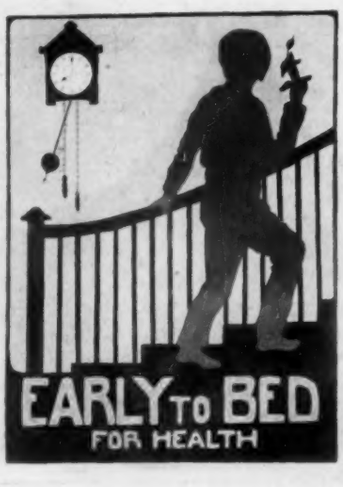
Doris Connell, High School of Commerce, Springfield, Mass.

Beatrice Bailey, Schenectady High School, Schenectady, N. Y.

Bernard Jensen, Fremont High School, Oakland, Calif.



Franklin Kahn, Frankford High School, Philadelphia.



Marguerite Mitchell, Yonkers High School, Yonkers, N. Y.

Virginia R. Loomis, Glenville High School, Cleveland.

Labor's Crusade for Health

DOROTHY WALTON BINDER

ORGANIZED labor has gone into the business of getting technicians to fight its battles and serve its members. No longer is sole reliance placed on the strong arm of the labor leader, the picket line, or sick and death benefits. Nowadays trade unions hire the best lawyers they can obtain to wage their legal battles against employers' associations. As arbitration becomes more and more a factor in settling disputes, university trained economists are being retained by a number of unions to present their claims for wage increases and resistance to decreases before impartial wage boards.

The most significant departure is the employment of expert medical and dental talent to protect the health of the union membership. This is a notable advance over the old method of doling out a few dollars to stricken brothers and sending a deputation of fellow unionists to the funeral.

The very rich and the very poor are able to command the best medical service of the community—the one through payment of fees, the other through the ministrations of the free dispensary. However, workers dependent on modest wages often neglect illnesses or else become the victims of inefficient doctors or charlatans.

The self-respecting family visited suddenly by sickness and soon reduced to penury by the promises of sanguine quacks and the expense of "patent medicines" is a familiar case in charity organizations. But there are thousands of families of whom charitable societies never hear, who somehow scrape along and manage to live an unfulfilled, monotonous life. Well-timed advice and science might transform them into useful and happy citizens.

The character of the job itself is often the cause of sickness. For this reason industrial hygiene has of late become a concern of scientists as well as of employers and workers. Government investigations have produced statistics on occupational diseases and the dangerous trades which have doubtless been the inspiration of much of the welfare work of large industrial corporations. But workers, particularly organized workers, look with suspicion on the "company doctor." They feel that welfare work is not an act of Christian love on the part of the employer, but merely a contribution to efficiency, a new way of keeping workers contented with low wages and long hours, another method of lessening the turnover.

But the importance of keeping members in good health gradually has impressed itself on the labor movement. There are now two definite health organizations, owned and directed by workers, that make available to wage earners medical service of the same quality as that obtained by the very rich and the very poor.

The home of the first cooperative, self-sustaining health center maintained by a trade union on a fee basis. The International Ladies Garment Workers' Union owns and operates the Union Health Center.

The pioneer experiment in this field is the Union Health Center in New York, organized by the workers in the women's garment trade in response to a demand for cooperative medical and dental treatment. The second organization is a technical bureau for all unions—the Workers' Health Bureau. It is a national health agency with headquarters in New York.

The International Ladies Garment Workers' Union, which holds a remarkable record in abolishing sweatshops, organizing

schools for its members, and raising the standard of living for all garment workers, established thirteen years ago what is known as the joint board of sanitary control. Employers and workers gathered around a common table to undertake the task of setting and enforcing sanitary standards for the garment industry.

At this time, dense ignorance of sanitary and health matters prevailed both among manufacturers and workers. Many of the petty competing manufacturers knew little and cared less for the improvement of sanitary conditions in their shops or for insuring safety regulations. The workers themselves had no notion of the first principles of personal hygiene and were so occupied by the struggle for existence that they did not think of the necessity for humane conditions in their work places. They were both ignorant of and indifferent to the need for adequate light, sufficient ventilation, proper sanitary conditions and safety regulations in the factories in which they worked.

The problems that confronted this joint board at its inception were the improvement of health conditions of the workers, and the teaching of better rules of personal hygiene and self care. Basing their calculations on a sickness rate of ten days per year for each worker and each member of his family, the 150,000 workers, members of the International Ladies Garment Workers' Union, represented a sickness rate of one million and a half working days for themselves and about four million days for their families.

One of the first ventures of the joint board of control was the physical examination of workers. Later, with the cooperation of the workers, the joint board established medical clinics and a dental clinic. Five years ago the local branches of the Ladies Garment Workers' Union decided to take over the medical and dental clinics established by the joint board and organize those clinics into a separate institution named the Union Health Center. The workers had come to the conclusion that their health was their own problem and that the clinics should be financed by themselves instead of jointly by employers and employees.

Today the Union Health Center occupies a four story building on East Seventeenth Street, New York, with medical, dental and physiotherapeutic departments equipped with up-to-date apparatus having a value of $100,000.

Ladies Garment Workers Were First

Members of the Ladies Garment Workers' Union pride themselves that theirs is the first cooperative, self-sustaining health center maintained by a trade union on a fee basis. The locals of the union own the center, but the medical, dental and health education services, together with all overhead expenses, are paid for by those who are receiving the benefits of these services. Only persons belonging to the International Ladies Garment Workers' Union, which claims a membership of about sixty-five thousand in New York, are eligible for examination.

Recently a rule has been adopted making it necessary for every new applicant for membership in the union to submit to a physical examination. This excludes those already ill or suffering from communicable diseases who may be joining with an eye to the tuberculosis and sick benefits established by the locals. However, out of 36,510 candidates examined up to January, 1923, only forty-five were rejected; these were suffering from active pulmonary tuberculosis or active infectious syphilis.

No sick benefits are awarded by the locals of the International Ladies Garment Workers' Union until the candidates have been examined by the medical department. These examinations, as well as the scrutiny of applicants for membership, form a large part of the work of the medical department. Last year, 17,805 examinations were made and 8,241 workers were examined and treated. There is a drug store in connection with the medical department and here members may get prescriptions filled at cost.

In the summer of 1914 the U. S. Public Health Service in cooperation with the joint board of control examined 3,100 garment workers and found that the number of defective teeth among them was tremendous and that what dental work had been done was of very inferior quality. A dental clinic was established by the joint board in 1917 and has proved exceedingly popular. In 1923 the dental department gave 26,788 treatments, had 4,502 patients, and received an income of $59,117.52.

First Aim Is to Prevent Disease

The greatest emphasis of the Union Health Center, however, is laid on preventive medicine and industrial hygiene. No one so badly needs authentic information on health matters as industrial workers. I remember hearing a lecture on sex hygiene given to a graduating class of telephone operators, young women just entering maturity. They sat in rapt attention, fairly lapping up the simplest facts of life and afterward I heard the whispering of, "Well, that's new to me" and "Wish I'd known that before."

Many workers live on superstitions handed down to them. To such, tuberculosis is an incurable disease, hospitals are to be avoided at all costs, birthmarks are caused by something one's drunken father said to one's mother when she was in an "interesting condition," and any one calling himself a doctor should be implicitly believed.

The medical waiting room at Union Health Center, 131 East 17th Street, New York

Few workers in institutions where there is no medical supervision know where to apply in case of need, where to be examined, what dispensaries to visit, what physicians to consult when sick.

To meet these general needs the Union Health Center has established a health information bureau where the worker may find out where to go for an appendicitis operation or where to find a good oculist.

The Center established four years ago a health school with popular lectures on health subjects and systematic instruction in first aid and dietetics, as well as a health forum where more general topics are discussed. These classes have so taxed the capacity of the auditorium of the Center that the union plans to secure larger quarters.

A health exercise class was organized last year. Here workers learn to correct postural defects through exercise. Pamphlets, health calendars and noon shop talks—all these are means by which health education among the garment workers is spread.

The dental department emphasizes prophylactic, educational and preventive hygiene. It stresses the need of periodical dental examination, the importance of oral hygiene and frequent prophylaxis.

As no profits are made by the Center or those connected with it, all medical and dental service is strictly on a self paying basis. The general fee in the medical department is $1 a visit. In the dental service the fees are according to the kind of work done, the time consumed and the material used.

Garment workers have become such earnest crusaders for health that they plan even greater activities. Already the land for a tuberculosis sanatorium has been bought and funds are being raised for its erection. And now the International Ladies Garment Workers' Union is looking to the establishment of a cooperative health center in which the Amalgamated Clothing Workers' Union, the Furriers, Capmakers and allied trades will join, making medical and dental service available for 150,000 workers on a cooperative basis.

"In unity and cooperation there is strength, in health problems as well as in economic matters," says Dr. George M. Price, founder and director of the Union Health Center.

Health Bureau Studies Industrial Disease

Hatters' shakes, lead poisoning and benzol poisoning in various trades, such as rubber manufacturing, are problems of industrial disease faced more specifically by the second organization, the Workers' Health Bureau. The health problem of garment workers is the general problem of any group, for the clothing industry in itself has no particular disease hazard. But there are many trades which present serious occupational disease problems. One instance is the granite cutters, where tuberculosis increased 144 per cent. from 1895 to 1918, according to the U. S. bureau of statistics.

The Workers' Health Bureau takes care of these industrial problems. It was established in July, 1921 with the following program:

1. Establishment and supervision of trade union health departments to provide careful, periodic medical examination.
2. Analysis and research to obtain exact information regarding occupational hazards.
3. Health instruction, through translating technical data into the language of workers and supplying them with information regarding the functions and needs of the body.

The New York painters were the first trade union to adopt the program of the Workers' Health Bureau. In July, 1922, six locals of New

York organized the Journeymen Painters and Allied Crafts Health Department. The painters health department, equipped with its own laboratory and x-ray machine, is now open four evenings a week and all day Saturday. The staff consists of a medical director, dentist, nurse, laboratory technician and x-ray operator, who is also a physician.

A careful and thorough medical examination is given each member of the union. Members suffering from trade diseases return to the department for further advice. The kind of examination offered would cost from $20 to $25. But by uniting their buying power, the painters have reduced the cost to $3, and a reduction to $1 is being considered in order to receive the support of all the local painters' unions.

Surgical room at Union Health Center

Health Report Wins Shorter Hours

Seven months after the department was started 4,500 organized painters crowded a mass meeting to hear the first report from their department on the health dangers of their industry. The meeting was unique in the history of labor, for the painters' five day week was at stake.

The report of the Workers' Health Bureau was entitled, "Health Facts in Support of the Five Day Week for Painters." It contained a summary of the medical findings of the first 267 men examined. These men were all supposedly in good health and their condition was, therefore, a general average of New York painters. Among these 267 men, 39 per cent. had arteriosclerosis, 59 per cent. had anemia, 1.5 per cent. had active lead poisoning, and another 2 per cent. were lead poisoning suspects. Since all but 2 per cent. of the men were between the ages of 25 and 40 the percentage of arteriosclerosis, known as the disease of old age, was striking.

These facts were massed against the employers demands for an increase in working hours. The New York painters won the forty hour week. The first trade union health agreement gained by painters in the United States through negotiations with their employers was based on fifteen health recommendations prepared by the Workers' Health Bureau for the painters of New York.

Convinced that workers in New York State are not properly protected by compensation, because of the omissions in the occupational disease section of the compensation law, the Workers' Health Bureau has drawn up five amendments to the law concerning a large number of trades having health hazards. These amendments to the law were introduced in the last legislature by the New York State Federation of Labor and will be considered in the next session of the legislature. One of the amendments concerns benzol poisoning, which the present compensation law fails to cover. Since the war benzol sells at about one third its prewar price. Its use in such trades as the painters' and hatters' has increased tremendously, and cases of poisoned workers have become an ever-growing menace.

Steals Soap Box Thunder

The Workers' Health Bureau is constantly preparing health facts for workers in various trades. It is ready to aid unions in the organization of their own health departments. On its advisory committee are three leading industrial hygienists of the United States: Dr. Emery R. Hayhurst of Ohio State University, Dr. Alice Hamilton of Harvard and Dr. C.-E. A. Winslow of Yale.

A soap box orator can always stir his audience by picturing the sad plight of the worker worn out by industry and thrown on the scrap heap. The trade union crusade for health is on the road to robbing the soap boxers of much of their thunder, and to aid in building a sounder race.

Planning a Christmas Dinner

RUTH T. LEHMAN

CHRISTMAS comes but once a year. And when it has come and gone, we often think that perhaps it is just as well that it comes no more often. For, in our desire to make the occasion a festive one, we plan a special dinner, one which will be "different" and which will include all the good dishes we can make. This means that we load the holiday table with such a host of good things—such generous amounts of food, such rich sauces, and heavy desserts—that no one can eat his share without suffering in consequence.

Probably it is in the dessert course that we go most to extremes. It is not at all uncommon for at least three desserts to be served at the close of the Christmas dinner.

What does this mean in terms of calories? Figuring most conservatively, we may have: mince pie and cranberry pie—a small serving of each—400 calories; ice cream and cake, 500 calories; nuts and candy, 100 calories. This makes a total of 1,000 calories; more than one needs in the whole meal. And these calories, mind you, at the close of a meal already heavy and rich.

What is the result? Our digestive systems are greatly overtaxed; we give our bodies an excellent opportunity to store up more fat, if we are already overweight; and in some cases, such as diabetes and high blood pressure, the result may be very serious.

Planning for Variety and Interest

Does this mean that the Christmas dinner must be like all other meals of the year, with nothing about it to reflect the holiday spirit? Not at all. But it does mean that, in attempting to make it different, we will not follow the time-honored custom of going to excess.

How, then, may we attain interest and variety, yet not commit the dietetic crime of superabundance?

The simpest answer is: Choose first those foods which to you spell "Christmas dinner"; then build the rest of your plan around them.

A most delightful hostess once said that she didn't need turkey for Thanksgiving dinner—chicken would do as well—but that it wasn't Thanksgiving dinner to her unless the bird was garnished with a cranberry necklace. To some of us, the key letter in Christmas dinner is cranberries; to others, mince pie, or goose, or plum pudding, or turkey, or a bowl of raisins, nuts and candy, or scalloped oysters, or chestnut dressing. But, whatever it may be, let us start our meal plan with it. Thus, we are assured from the beginning that the dinner will have the desired festive note.

Choosing "Christmasy" Foods

The planning of the rest of the meal is not quite so simple. Choosing "Christmasy" foods is largely a matter of recalling past Christmas dinners. Selecting dishes that will go well with a chosen food takes imagination—imagination as to how combinations of foods will do as to taste, color and texture. It calls as well for an understanding of what makes a course heavy or light.

What does this mean in terms of actual meal planning? It means that we will not serve tomatoes and cranberries together, for both are tart in flavor; that mashed potatoes, onions and cauliflower will not be our choice of vegetables for the resulting lack of color would be most uninteresting; that either white or sweet potatoes will be served, but not both, for they are of the same value and of too much the same texture to be other than commonplace when served together.

It means also that if we decide that plum pudding is to be the "grand finale" of the meal, succulent and flavor vegetables will be used in place of starchy ones, that a fruit ice rather than a rich fruit sauce will accompany the meat course, that dressed lettuce is to be preferred to a rich salad; in short, that the other courses of the meal will be comparatively light, and correspondingly lower in calories. It simply means that we emphasize those features making for attractiveness—a big factor in the enjoyment of one's meals, holiday or otherwise.

Selecting Interesting Accompaniments

In emphasizing attractiveness, it is most important to plan for garnishes and the like. A very plain dinner may be removed from the commonplace by means of simple, light accompaniments that serve to accentuate and complement the flavors of the different courses. Care in selection must be exercised, it is true, for many accompaniments are as rich or richer than the foods with which they are served.

Bright jelly cubes or fruit ice with the meat; cheese wafers; miniature cream puff cases filled with mayonnaise; dainty sandwiches with the

SUGGESTIVE CHART TO USE IN PLANNING THE CHRISTMAS DINNER

Soup	Meat	Vegetables		Salad	Dessert
		Starchy	*Other Vegetables*		
Bouillon— beef chicken tomato oyster, etc.	Goose Chicken Turkey Duck Mock duck Roast beef Steak, etc.	White potato Sweet potato Rice Peas Lima beans	French artichokes Beets Brussels sprouts Cabbage Cauliflower Tomatoes Carrots Onions Peppers Spinach Squash Turnips	Hearts of lettuce French dressing Russian dressing Very simple fruit salad	Plum pudding Pie— mince pumpkin cranberry Cake Frozen dessert Candy and nuts Gelatin dressing
ACCOMPANIMENTS					
Olives Celery Bread sticks Crackers Pimento Diced vegetables Tapioca pearls	Stuffing Gravy Cranberry— jelly sauce ice Sauces— orange currant jelly cherry, etc.			Cheese crackers Tiny cheese biscuits Cheese straws Brown bread rolled sandwiches Tiny puff shells filled with cottage cheese or mayonnaise	Salad rolls, etc. Sauces Tiny sponge drops Small iced cakes, etc.

dressed lettuce, tiny sponge drops, rather than iced cakes, with the frozen dessert—these are suggestions which add the different note and which, at the same time, do not greatly increase the calories of the course.

A Sample Meal

In the chart on this page are suggested a number of foods which may serve as the different courses in the Christmas dinner. Let us plan a meal from them.

Suppose we decide upon fowl and cranberries in some form to give the touch of Christmas to the dinner. For the starchy vegetable, mashed potatoes are most acceptable with rich chicken gravy. Brussels sprouts give the course interesting flavor and color. With this main course, a light soup will be most suitable, and, if garnished with strips of pimento, will repeat the note of color. Hearts of lettuce with Russian dressing and tiny rolled sandwiches of graham bread; ice cream and sponge drops—and the meal is planned.

The menu then reads:

Bouillon with pimento garnish
Olives Crackers
Roast chicken Dressing
Cranberry ice
Mashed potatoes Gravy Buttered Brussels sprouts
Hearts of lettuce Russian dressing
Graham rolled sandwiches
Ice cream Sponge drops
Coffee

We have kept the Christmas colors in pimento, olives, cranberry ice, Brussels sprouts, lettuce and dressing. We have alternated heavy and light courses. We have used as accompaniments, the ice, rolled sandwiches and sponge drops; they have made foods otherwise rather ordinary assume a holiday air.

Best of all, we have planned a meal which can be enjoyed in all its courses; for there is not such great variety nor such predominance of heavy courses that any one should leave the holiday table—as he undoubtedly would with the usual type of Christmas dinner—feeling that he would be content not to see food again for many a day.

Ventilating Home, School and Workshop

JOSEPH HERZSTEIN

TO OPEN the windows or to shut them, that is the question. In the home, the proper use of windows has usually been found sufficient to maintain comfortable and satisfying air conditions; but the use of windows alone for the ventilation of larger enclosures like offices, workrooms or schoolrooms has generally been regarded as inadequate.

For large school buildings, window ventilation has frequently not been relied on, and blower fans have been used to force air along specially constructed ducts into the rooms. It has been alleged that in this way only could a constant and adequate air supply be assured, commensurate with the needs of the occupants.

It seems necessary to define exactly what good ventilation is.

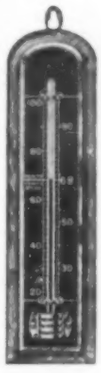
In many places, people develop a wholesome antipathy for mechanical systems of ventilation operated with windows closed. This may be due merely to temperament or mental prejudice. A man used to sleeping with his window open found himself in a hotel room with all the windows tightly shut. He went to bed and tossed about, until he gave up all hope of falling asleep because of lack of air. Finally, in desperation he threw his shoe through a window and fell asleep. In the morning he found the window tightly closed and the mirror smashed. Evidently prejudice and preconceived notions play some part in our study of ventilation.

At last, however, a group of scientists has conducted a much needed, prolonged and open-minded investigation. On the findings (published by E. P. Dutton & Company) of this group, the New York State Commission on Ventilation, of which I was secretary, this article is generally based. The answer to the question: "What constitutes good ventilation?" became quite definite as a result of four years of research by this commission.

Room Should Be Kept at 68° or Below

It was found that the primary essential for good ventilation was the maintenance of a proper air temperature of 68 degrees or below without the production of chilling drafts. The actual amount of air supply per individual, which in the past had always been specifically stated, is relegated to a secondary place. The commission simply states that the air change should be sufficient to avoid the accumulation of odorous or other substances arising from human occupancy.

Such a conclusion arouses a natural surprise. Every one knows that the human body uses oxygen taken from the air inspired into the lungs, and that it gives off carbon dioxid, as a gaseous waste product in the expired breath. When one thinks of the air in a room as being stale as a result of human occupancy, one thinks of a lessened amount of available oxygen, and a harmful accumulation of carbon dioxid or other waste products. It is generally believed, therefore, that ventilation or air change in an occupied room is necessary in order to take care of these particular chemical alterations in the air.



However, it has been demonstrated that this is not the essential reason for changing the air of a room. Under the usual practical conditions of occupancy, the changes in the oxygen and carbon dioxid content of even very badly ventilated rooms are entirely too small to have any harmful or significant physiological effect; they do not even affect comfort.

Chemical Content of Air Not Important

Certain experiments conducted in England showed that a group of medical students were entirely comfortable in an atmosphere which was so poor in its oxygen content that matches would not burn. The carbon dioxid in this atmosphere had accumulated to over one hundred times the normal and yet the men were comfortable!

They were very uncomfortable, however, when this same air was made warm and moist. Their discomfort was completely relieved as soon as the heated air was set in motion by means of electric fans. In other words, the air from the fan carried off the body heat and had more to do with their physical comfort than the actual chemical content of the air they breathed, even though this air was more abnormal than it ever becomes in actual practice.

The superior importance of the physical conditions of the atmosphere, as compared with the chemical conditions, was amply corroborated by the two years of laboratory experiments of the commission. Large numbers of college and high school students served as subjects. The effects of temperature, humidity, air supply, odor, carbon dioxid, stagnation and air movement were observed in numerous tests in which 172 men and seventy women subjects took part. The most important and sensitive

types of measurements and observations were made in order to determine the effects of air conditions on health and physical and mental efficiency.

The results of this work will help to formulate an answer to the moot points in the problem of ventilation. It will indicate the type of air environment each person should aim to secure.

Overheating Is a Menace

The temperature of the air of a room is the most important factor in practical ventilation, be it in the home, the school or the workshop. This has been demonstrated in many ways. First, air at a high temperature, around 75 degrees, especially when it is moist, interferes with the normal loss of body heat. When air becomes excessively warm the body cannot lose heat to the surrounding air.

Discomfort soon arises as a consequence of this interference with the normal loss of heat. A burden is thrown on the heat-regulating mechanism. An increase in the body temperature, an increase in the rapidity of the heart rate, an increase in the rate of breathing, and a fall in the general tone of the circulatory system follow. In fact, the responses of the body to any interference with its normal heat losing function are strikingly similar to those induced under conditions of fever.

In addition to the discomfort brought on by overheating, this condition also reduces physical efficiency. Under cooler atmospheres, experimental subjects were able to perform a larger amount of physical work than was performed in warmer air conditions. This finding seems to work out in practical experience, for when it is hot, one is less inclined to undertake or to continue any physical exertion, especially when one tends to become quickly overheated.

In industrial establishments this should be a point of practical significance. Increased physical efficiency would be the result of cool but comfortable atmospheric conditions.

Studying the effects of air conditions on the nasal passages. The young man is shown breathing on a metal plate. The amount of moisture deposit is used to detect changes in the size of the breathing space in the nostrils.

Overheating causes other harmful effects. It is a common experience to feel disagreeable sensations in the air passages of the nose after having been in an overheated apartment. Direct examination of the nasal passages of subjects who were exposed in an experimental chamber to overheated conditions showed that heat tends to close the nasal passages. It induces a swelling of the elastic membranes and structures in the nose. The membranes become much redder and also more moist with nasal secretion. When the air passages are then exposed to rapidly moving cold air, the nasal membranes are rendered suddenly anemic. They become pale but still remain swollen.

Less Heat Means Fewer Colds

The normal and healthy lining of the nose acts as a defensive barrier against such bacteria as may be responsible for a cold in the head. The exposure of the nasal membranes to wide fluctuations of temperature causes a reaction that weakens the powers of defense of the membranes against the invasion of bacteria. Yet this is just the type of exposure which the membranes experience when one goes out doors from an overheated room on a cold, wintry day.

Since an ordinary cold is likely to usher in a train of undesirable and dangerous after-effects, it would seem worth while to avoid this unhygienic and unnatural exposure of the nasal membranes first to immoderate heat and then to extreme cold.

The favorable effect of a cool indoor environment was remarkably evidenced in a study which the ventilation commission conducted in cooperation with the New York City department of health. The purpose of the investigation was to determine the occurrence of respiratory disease and colds among school children under ordinary practical conditions of schoolroom ventilation.

During a period of twenty weeks in the course of two winter seasons, 5,500 school children were kept under constant observation by a large corps of nurses. The children were all examined daily for evidences of sickness. In addition to examining the children, the nurses visited the homes of all children who were away from school, in order to learn the exact cause of absence. The children were located in twelve different schools.

The rooms of one group of children were kept at a temperature of 67 to 68 degrees by means of window ventilation. A second group spent their school hours in rooms at a temperature of 68 to 69 degrees, ventilated by a system of fan ventilation. The third group occupied window ventilated rooms kept at a temperature of 59 degrees, or some eight to ten degrees lower than the other rooms. The children in this cool type of classroom were not provided with any extra clothing.

The children exposed to the cooler air conditions were found to have far less respiratory disturbances like colds and bronchitis than the children exposed to the highest temperature. (The coolest rooms were window ventilated while the warmest group of rooms were fan ventilated.)

The children in the fan ventilated rooms had more colds than the children in either of the two types of window ventilated rooms. The window ventilated rooms had fewer children absent from school on account of respiratory sickness than the fan ventilated rooms.

The children exposed to quite cool indoor atmospheres (10 degrees below what one would regard as usual for real comfort), enjoyed better health than those exposed to a much higher temperature with fan ventilation. There was little difference in the amount of sickness among the children exposed to temperatures of 59 degrees or 67 degrees under conditions of window ventilation.

The experimental chamber in which the effects of atmospheric conditions were studied.

While this investigation pointed to the superiority of window ventilation over fan systems, it demonstrated at the same time that cool indoor atmospheres are consistent with good health. Schoolrooms kept at 59 degrees had no unfavorable effect on the health of the children as measured by the lack of respiratory infections among them. Such rooms were found to be superior to fan ventilated rooms maintained at a temperature of 68 to 69 degrees, the usual temperature for rooms ventilated by the fan method when under good control.

How Moist Should Air Be?

If air is not overheated there is no need of manipulating its moisture content. Air with a high moisture content, especially when it is warm, diminishes the loss of body heat through the normal avenue of evaporation of water from the skin. This evaporation goes on at all times. All of the evil effects of overheating are increased in severity when the air is too moist. skin, the face and the warm air envelope which

Special tests made by the ventilation commission and designed to detect slight alterations in nervousness or irritability failed to show that low humidities, such as are found under actual practical conditions, have any of the harmful effects attributed to them.

It was found through experiments that the air of a cool room lacking any fresh air supply and containing all the odoriferous constituents arising from respiration or the bodies of the occupants had no demonstrable effect on comfort. This stale air contained large amounts of carbon dioxid. As compared with especially fresh air, such air did not have any effect on body temperature, blood pressure, rate of the heart action, respiration or other physiological reactions. Mental efficiency, as measured by elaborate and extensive psychological tests, was not impaired by stale air. Hot, stale air had no different effect than hot fresh air on mental capacity.

In two ways, however, stale air did produce a real and a somewhat immediate result. As compared with the effect of fresh air at the same temperature, vitiated air reduced the total performance of physical work, and, more important, decreased the appetite for food. This depressing effect on appetite, if exerted over a long period of time, may result in a significant lowering of the body nutrition.

Breathing stale air exerts no especially attractive appeal to the imagination, but so far as the senses are concerned, comfort in a room is primarily affected by the physical condition of the air, and secondarily, if at all, by departures from the chemical purity of outdoor air. When people open the windows of a room because the air feels "too close," unless the air is noticeably foul, they open the windows because the air is too hot and too moist. The chances are that if the air of such a room were chilled ten degrees, say from 75 degrees to 65 degrees, without diluting it with cool fresh air, it would prove less objectionable.

I do not favor breathing stale or vitiated air. Quite the contrary, I applaud the outbursts of the fresh air enthusiasts, provided they do not freeze one out! Fresh air is certainly an essential for good health, and as much of it as possible should be secured at all times. The stimulating effect of fresh air, however, is not due to its purity, but to its cooling effect on the skin, the face and the warm air envelope which surrounds the body.

Mothers of the World

An Egyptian mother with her two children starting for market in Cairo. The children go along as the master of the house wants to sleep undisturbed.

The Serbian peasant mother carries her babe in a basket strapped on her back. She can labor in the fields as untiringly as her husband.

Photos by International

Underwood & Underwood

The Immigrant Madonna

This Christmastide, America, I bring to you my son,
My baby son.
He comes with little heritage,
But his eyes are clear, his body strong.
He is ready for you to do with him what you will.
What will you?

Will you use him hurriedly for your quick ends?
And will you then discard him because he is worn out—and still a foreigner?
Or will you teach him, watch him grow and help him to be one of you,
To work with you for those great things you seek?

He is my son, America,
And all my treasure.
I bring him here to you—
And you, what will you do with him?

—Helen Dwight Fisher.

Heredity in Disease

BERNARD FANTUS

OF THE four causes of disease—physical, chemical, psychic and hereditary—the hereditary causes have received less attention than they deserve. A great deal of misinformation, responsible for much unnecessary suffering and unhappiness, prevails regarding hereditary causes of disease.

There are three fundamentally different ways in which disease is transmitted from parent to offspring: by intoxication, by infection and by true heredity.

At the moment of the union of a single cell from each of the parents, the new individual begins its existence. From that moment on the mother is merely its nurse, providing it with suitable food and surroundings. Any influence acting on and modifying it after this union is something acquired by what is already a separate entity; it is not truly heredity. It is antenatal disease—disease occurring before birth.

The importance of distinguishing between true heredity and antenatal disease lies in the difference in the laws they obey. Antenatal disease is inherited like property. It is much more self limited, and, in general, does not affect the third generation. Truly hereditary disease, on the other hand, may be transmitted from generation to generation, just as the color of the skin, hair or eyes is transmitted.

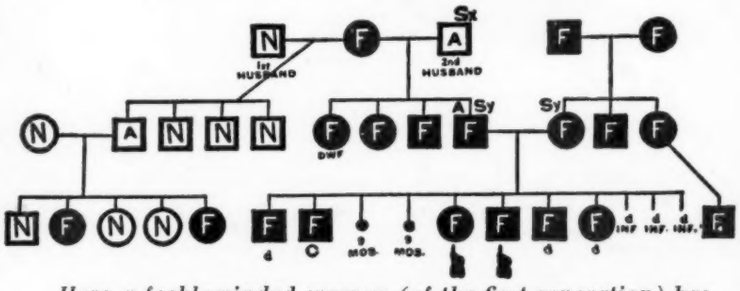
Blond hair, for instance, is due to absence of something in the germ cells that determines the development of color. If both parents are blond, all the children will be. If a dark haired person without blond ancestors marries a blond, the probabilities are that all of the children will be dark haired—if not at birth, later in life—for the color determiner will be present in each of the offspring.

However, dark haired parents may have light haired children provided both have close relatives with light hair.

Owing to the striking resemblance of these facts to those discovered by the monk Gregor Mendel in connection with his experiments on sweet peas, we speak of this as mendelian inheritance. The light hair color is covered over by the dark color; the light hair is called a recessive, and the dark a dominant character. Many, but not all, diseases transmitted by true heredity are recessive to the normal.

In studying the inheritance of disease we must be careful not to confuse the names of diseases for symptoms of actual disease. Thus it is not feeblemindedness, insanity or epilepsy, as such, that is transmitted by heredity but only a certain form of these. The feeblemindedness that is the result of meningitis, epilepsy and insanity due to a skull fracture are not of hereditary character.

On the other hand, there are families whose nervous systems lack something to make them function normally. This is a condition spoken of as neuropathic constitution. In such families feeblemindedness, various forms of insanity, epilepsy, migraine, hysteria, and neurasthenia, all may be found in different members and transmitted in motley array to the offspring; but in accordance with Mendel's law.



Here a feebleminded woman (of the first generation) has married a normal man and has four normal children, except that one is alcoholic. Then she marries an alcoholic sex-offender (who is probably also feebleminded) and has four feebleminded children. Here the mental strength of the first husband brought the required strength into the combination, so as to give good children.—GODDARD.

Thus two mentally defective parents with a nervous disease that is inherited will produce mentally defective children. Evidently such defective mentality is due to absence of some factor; and if this factor (that determines normal development) is lacking in both parents, it will be lacking in all their children. Such sequence is illustrated in the accompanying figure.

A second rule of heredity is that in general no imbecile is born except of parents who, if not mentally defective themselves, carry this defect in their germ plasm. When two such persons marry, the probability is that one fourth of their offspring will be defective—the mendelian ratio. This occurs especially in consanguineous marriages (that is, marriages between close blood relatives) in defective families. In such, the probabilities of two defective cells uniting are 25 per cent., according to chance.

In view of these facts, how great the folly to permit seriously defective persons to propagate their kind or to pollute the hereditary

stream of normal individuals. It would be cheaper, and much more humane, if all grossly neuropathic individuals were cared for in sex-segregated public institutions. Sterilization of such unfortunates might be considered as an alternative. Truly mendelian heredity of disease can only be eliminated by preventing the reproduction of those who carry this form of inheritance to a marked degree.

Lead Poisoning Inherited

The inheritance induced by poisons, such as chronic lead poisoning, is of a different nature. Lead has been found through chemical analysis to be present in relatively large amounts in the unborn offspring of animals poisoned with this metal, and in the organs of a premature sickly infant, born of a mother chronically intoxicated with lead.

This is evidently the reason why the frail infants of lead-poisoned mothers are so likely to die soon after birth. Hence in a number of enlightened countries there are laws against the employment of women in occupations that may bring on lead poisoning.

It is less well known, however, that paternal lead poisoning, the mother being unaffected, may result in a large proportion of premature births and of early death of infants. In a certain investigation it was found that only two children of thirty-two such childbirths survived three years and only one of these reached the age of twenty. While this must have been exceptionally severe lead poisoning, still it proves that degenerative changes in the male reproductive cells may lead to serious defects in the child. It has not been shown that lead poisoning is transmitted to the third generation.

Drunkards Apt to Beget Drunkards

Heredity in alcoholism is a much more complicated problem. We must recognize that alcohol is quite as liable as lead to cause degenerative changes in the offspring. On the other hand, gross alcoholism is in itself an evidence of an unstable nervous system. A person with a normal nervous system is much less likely to become a confirmed drunkard than one whose nervous system is below par, owing to inheritance of a defective nervous organization. It is the combination of these two influences that accounts for the horrible records resulting from studies of the children of alcoholics.

Over 20 per cent. of the offspring of confirmed drunkards are stillborn. The mortality of infants of alcoholic mothers is 2.5 times greater than the mortality of infants of non-alcoholic sisters and daughters of these intemperate women. A parallel study of ten alcoholic and ten non-alcoholic families showed that 83 per cent. of the children in the alcoholic families were diseased, while only 19 per cent. in the non-alcoholic families were diseased. From 25 to 50 per cent. of children who are idiots and of epileptics have either an alcoholic father or mother, or both.

That drunkards beget drunkards has long been recognized. Institutional statistics show that from 20 to 75 per cent. of alcoholics have alcoholic parents. This does not mean that the imperative craving for alcohol is inherited, but that a weak and unstable nervous system is transmitted which renders the individual liable to excess in all things, including alcohol.

For any one to marry a real drunkard is a sin not only against posterity but also against oneself; for not only are the offspring prone to dreadful afflictions, but an alcoholic is liable to be irritable, quarrelsome, jealous and violent. He cannot be or remain a good provider or helpmate. The chances of reforming a confirmed drunkard or a true dipsomaniac (one who goes on occasional sprees and can't help it) are very poor; and even if reformed, such a person is in the marriage market not only "damaged goods" but made of poor material to begin with.

Tuberculosis Not Truly Inherited

Tuberculosis is not a truly hereditary disease. This statement is made in opposition to a generally held opinion. Careful studies have shown that infection of male or female reproductive cells does not occur and could not occur. It is unreasonable to trace a tuberculosis occurring in later years to prenatal infection.

Briefly stated, the situation is this: The blood of the unborn infant within the mother's womb is separated from that of the mother by a membrane in the placenta. This membrane is very thin but it cannot be penetrated by micro-organisms unless it becomes diseased. Should tubercle bacilli get through the membrane, the baby will probably be stillborn; or, if born alive, will die shortly after birth.

This kind of transmission has nothing to do with the manner in which familial tuberculosis is contracted. The latter form occurs from continued close contact with an individual who is throwing off virulent tubercle bacilli. In the same manner, a child born of healthy parents may become infected by a tuberculous nurse.

Tuberculosis runs in families because of the great opportunity for infection, especially during the first few years when the child is kept in close communication with its parents. If the mother is tuberculous, it seems impossible for the infant to escape infection. Children of tuberculous parents removed from their families and other sources of contagion remain free from the disease. It may be admitted that children whose mother was weakened by tuberculosis or other exhausting disease at the time of conception or childbirth are born weaker and more susceptible to infection than those born of healthy parents. However, this does not

imply what is commonly meant by hereditary taint.

Though tuberculous individuals should never marry or be permitted to have children as long as active disease is present, when recovery has occurred, when symptoms have been in abeyance for several years and when the individual's physical condition is excellent, we have no right to forbid marriage. There is every reason to hope that the children will be perfectly strong and well developed.

No Third Generation Syphilis

Syphilis may seem more nearly capable of hereditary transmission than tuberculosis. A child congenitally infected with syphilis may grow to be a curse to its parents and to itself by its manifold afflictions and incapacities. It is, however, not a case of true heredity, and is not transmitted to the third generation. The mechanism of inheritance is exactly the same as in tuberculosis; unless the mother has become infected with syphilis, the child cannot be syphilitic unless the disease invaded the placenta and the micro-organisms thus reached the infant's side of the separating membrane.

A father, though undoubtedly syphilitic, may not transmit the disease either to his wife or the child. It is true that instances are known of women, apparently not suffering from syphilis, having given birth to syphilitic children. That they, however, must have had syphilis, though in a mild and possibly unrecognizable form, is shown by the immunity to syphilis they have acquired. It is a well established fact that although a syphilitic infant may infect any other person, for instance a wet nurse, no mother of such a child has ever been given syphilis by her own offspring.

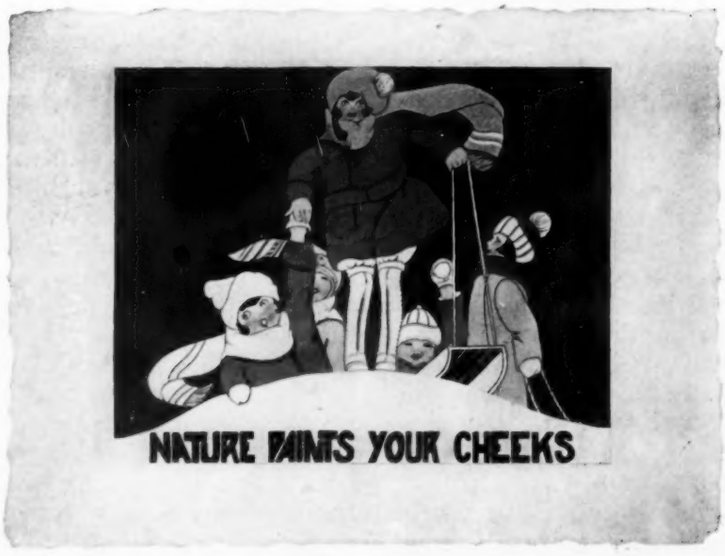
The similarity between syphilitic and tubercular inheritance is further borne out by the fact that the infected offspring generally dies before birth; syphilis being the single most important cause of abortions and miscarriages. If the child is born alive, the chances are 60 to 90 per cent. that it will die and be relieved of its sufferings within the first few months of life.

However, a syphilitically infected pair may overcome their infection and have healthy children. There are numerous instances in which a woman infected by her husband soon after marriage has abortions, first at an earlier, later at a more advanced stage of gestation, then one or more miscarriages, to be succeeded by the birth of a child surviving but a few hours, days or weeks. Eventually an apparently healthy child may be born to develop later on symptoms of inherited syphilis, and finally there may be brought into the world a perfectly healthy child. Appropriate treatment may shorten this grim sequence to a great extent, but it cannot guarantee complete immunity from consequences.

Must Develop "Eugenic Conscience"

For the ultimate conquest of these forms of disease we must look to the improvement of medical knowledge and the spreading of such knowledge among the people. In the past the only definite restriction to marriage has been against the union of close relatives. Consent and blessing has been given to the marriage and reproduction of the feebleminded, the insane, the diseased and the vicious.

We need the development of the eugenic conscience in individuals and of a strong eugenic sentiment in the community to control and finally eliminate hereditary disease. Every child has a right to be well born; it is a crime against humanity to transmit hereditary disease. These inflexible social laws will have to become ingrained in our minds. While we cannot choose our parents, increasing knowledge and improved control of sex relations will eventually enable us to determine the kind of children we shall have.



A Boy Artist Without Arms

AN ARMLESS artist—that is Henry Weigmann. For although an artist without arms seems an impossibility, we learn that to those with a will nothing is impossible.

Where there's a will there's a way is an old saying. Henry had the will; a school for handicapped children was the way. Now Henry designs Christmas cards and markets them with such success that he has paid $125, the cost of two artificial arms, from his own earnings.

Henry's story is little short of a miracle—a miracle of determination, a miracle of patient instruction, a miracle of surgery.

When Henry was seven, he entered the first grade of the Spalding School, an institution for handicapped children that is a part of the Chicago public school system.

The teachers saw that he had no arms and an examination showed that Nature had not intended he should have—not even stumps. Very well, thought the teachers, we will teach him to write with his toes, for they had employed that method before with success. But, alas, Henry was found not to have any toes.

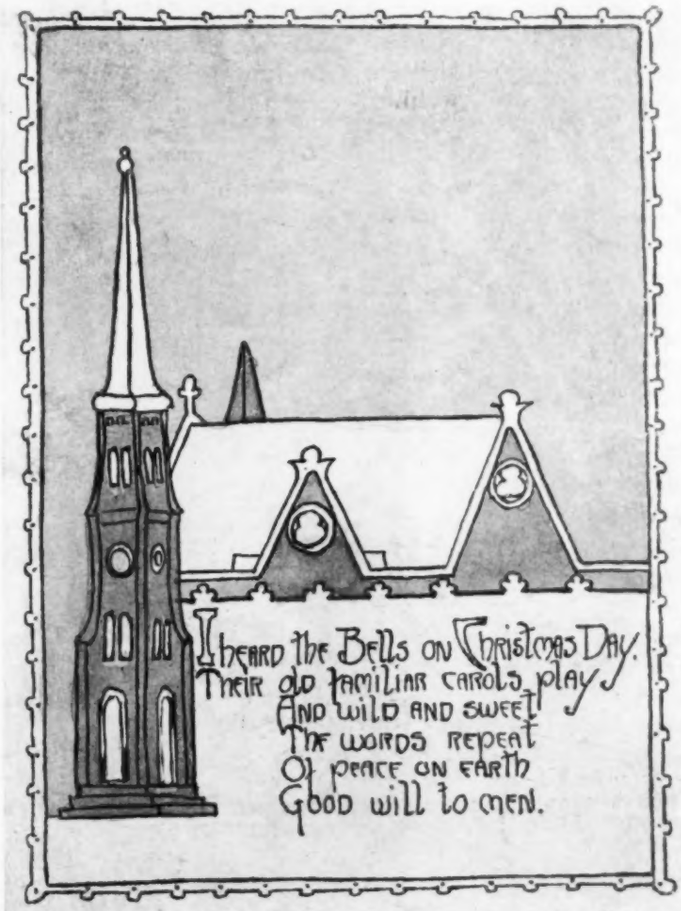
Instructors in schools for the handicapped are not easily dismayed. They obtained a huge pencil and, placing it between Henry's chin and his shoulders, taught him to write. Scissors he operated with his teeth. In this fashion Henry carried on the work of first grade.

This strange mode of penmanship, however, was not going to be a good thing for Henry's eyes, the teachers soon decided, for it called for too close work. Accordingly, Henry was promoted for part of his school day to the high school commercial department and assigned to a typewriter.

A drum stick from the orchestra, held between the shoulder and chin, enabled Henry to reach the keys and, with blind letters, he began to master the touch system. This system was used as a further means of lessening eyestrain.

By the time Henry had reached fifth grade, he had learned to run the typewriter with such speed and accuracy that he frequently outdid the school instructors.

In the meantime the Spalding School was putting forth every effort to overcome Henry's handicap more completely. School physicians and orthopedic surgeons were called into consultation, but all shook their heads over Henry.


I heard the Bells on Christmas Day.
Their old familiar carols play,
And wild and sweet
The words repeat
Of peace on earth
Good will to men.

This is one of Henry Weigmann's Christmas cards. He designed and tinted enough of them last year to pay for his two artificial arms, for Nature had not provided him with any arms—not even stumps.

During the war an international committee on rehabilitation, composed of orthopedic surgeons from many countries, met in Washington and Miss Jane Neil, principal of Spalding School, discussed Henry's case with them but received no encouragement.

When the great war was over, a Chicago surgeon of note, then traveling in Italy, was asked by several orthopedists whom he met about the work of the Spalding School and about Henry, of whom they had heard. The Chicago doctor was compelled to admit that he knew nothing of the school in his own city which seemed to have an international reputation.

But no sooner was this surgeon back in

Chicago than with fifteen men from his hospital staff he presented himself at the Spalding School and took a look at Henry.

"Have x-ray pictures ever been taken of his shoulders?" he asked the school staff.

When he was answered in the negative, he immediately had the shoulders x-rayed and was surprised to find underdeveloped, rudimentary stumps buried in the flesh. There were on both sides the rudiments of the humerus bone.

It took some time to get the consent of Henry's parents to an operaion, but in the summer of 1920 when Henry was about 12 years old, the surgeon set to work. He operated, getting a fairly good right stump, and a month later brought out the left stump.

Operation Gave Him Stumps

To these two little stumps were to be attached artificial arms managed by the shoulder and back muscles. Had it not been for the years of work of the physical education teachers at Spalding School in developing Henry's back and shoulder muscles, his new arms would be of no use, the surgeon declared.

With the new stumps, the physical education instructors set to work with renewed energy and by Christmas they had developed the stumps so well that by inserting a wand under the right one, Henry could knock a ball around the gymnasium.

Shortly after Christmas, Henry's artificial arms were attached and before he left the doctor's office he had written his own name. The arms cost $250 each and the money to pay for them was raised by the school.

It was then that Henry began for the first time to satisfy his ambitions along artistic lines, and with the help of his new arms he designed Christmas cards of such excellence that they readily sold. His artificial arms, however, were only partially successful as he could raise them no higher than his waist line.

A Minneapolis concern was approached about arms for Henry, and two new arms were designed. These he now has and they can be raised to shoulder height.

School officials told Henry that he must himself pay for the new arms—which had been given him at an exceedingly low price—and this he has done through his Christmas card designs.

Is Promising Art Student

Last summer Henry enrolled for work at the Art Institute of Chicago where instructors became much interested in his work and said he seemed to possess talent.

Recently he was the feature of the weekly luncheon program of the Chicago Rotary Club. An easel was set up and Henry sketched a caricature of Mr. Paul Harris, father of Rotary, which was immediately recognized by the Rotarians.

Henry is now in high school. He is just an ordinary boy, say his instructors; he makes the teachers cross with his poor attempts at spelling and seems in every way the normal high school student, except, perhaps, for his disposition. That has been sweetened by long years of pain and suffering and constant struggle against his great handicap until Henry has become patient, thoughtful and in every way an extremely lovable boy.

When the Child Loses His Appetite

HAROLD A. ROSENBAUM

MUCH has been said about the child that does not or will not eat. The effect of the emotions and sensory stimulation in relation to appetite has not received sufficient attention.

There is too great a tendency to consider the appetite as the desire of the individual for food, varying as he requires material for repair, growth and fuel. We assume that he should take this food no matter what the associated conditions are. Consider the child as an emotional, impressionable being. With this viewpoint, our method of dealing with him is quite different from that employed by those who fatten geese by cramming corn down their throats.

Most of us can recall situations in our own lives when eating was purely mechanical because we were affected by some great emotion: fear, grief or remorse. Concentration on an all absorbing accomplishment or even ennui may have the same effect. Children are as sensitive to these emotional strains as are adults.

If the child is continually being perturbed at meal time he approaches his meal in a perfunctory way. He eats little and chooses only that which attracts him most. For this reason it is unwise to correct or scold the child when he comes to his meal. It is better to wait until after he has eaten. If disturbing the appetite is frequently repeated, a chronic nervous loss of appetite results. Once this pernicious condition is present, it may take weeks and months of understanding correction before the child improves.

May Be Little Egotist

Nervous loss of appetite is due to many causes. The condition is often found in the youngest, sometimes in an only child, or in one surrounded by several adults, all anxious to minister to him. It may have its inception during some period of illness or excitement when the child has a lessened desire for food and the family is alarmed because he does not eat. They try petting, pleading, coaxing and bribing and the child learns how much attention he can get by not eating.

In this way he, unconsciously perhaps, develops a habit of eating poorly—he has become a little egotist. What this child needs is to be let alone and a normal appetite will return. This lack of appetite is quite different from the toxic loss of appetite seen in the really sick. These sick little patients must be given food either by persuasion or force; otherwise they will not survive.

There is the story of the woman who confessed that she got away from home before she learned to eat. The idea that she didn't eat had been constantly impressed upon her. If a neighbor came in her aunt would say, "I don't see how Ethel gets along on so little food" or "Ethel eats like a canary" or the mother would say to the father, "Ethel just scarcely ate anything today."

If one visits a well ordered orphan asylum where children are allowed to live as naturally as it is possible in an institution, he cannot help being impressed by the way in which the children eat. Each child cleans his plate. This is due to regularity and the simplicity of the food as well as to freedom from the stimulation and high tension now existing in home life. It is also due to the fact that the individual with the diminished appetite is not occupying the center of the stage through efforts to induce him to eat.

But this is not always true. It was found by those doing nutrition work in one orphan asylum where the children were allowed much freedom at meal time that a few of the children were upset by the excitement and noise of the large dining room. These children ate much better when placed in a group by themselves in a more quiet room.

"Ethel Eats Like a Canary"

THE whole family made remarks about Ethel's lack of appetite, until it was utterly impossible for her to eat a normal meal. It wasn't expected of her, so she didn't. Not until she grew up and got away from home, did she learn to eat food of the proper kind and amount.

Nor is the dinner table a place for corrections and scoldings, says Dr. Rosenbaum. It is better to wait until the child has eaten before pointing out to him the error of his ways.

Family disputes are often a cause of chronic nervous loss of appetite. Who has a desire to eat in the midst of a storm?

Improved appetite is sometimes seen in children sent from homes to preventoriums and nutrition camps. A girl of 12 years, whose dietary, bed time and general habits were very satisfactory while at home, nevertheless failed to gain in weight. She gained twenty-one pounds in five months at a preventorium.

The meal time should be a period of pleasant, relaxed calm. This holds for babies, children and adults. Unfortunately, this state of affairs often does not exist. One zealous, exuberant young mother thought her baby ate better with the victrola playing and if she thought that he wasn't eating enough she would pick him up and dance to the music, occasionally giving him a spoonful of food. This child developed such an aversion to eating, with resulting poor state of nutrition, that he had to be taken to a hospital and put under the care of a nurse who taught him to eat properly.

No Peace at the Dinner Table

A physician had painstakingly examined the children of a family which visited him frequently. Physical defects had been corrected, the dietary was proper, and the general hygiene good as far as could be learned; yet the appetites and nutrition of these children improved very little. The reason for this failure became apparent when the physician had a closer contact with the home. Regularly at meal time there were strenuous disputes, sharp corrections and rebukes. This occurred between father and mother, parents and children, and between children. Who has a desire to eat in the midst of a storm?

Agnes, a little girl of six ate very poorly, was pale and apathetic. Her condition did not improve and her physician on closer contact with her environment found that the child had as a constant companion at meals, a lugubrious old nurse. When the nurse was changed and the child was given more freedom she ate well and improved rapidly.

The child who often has to eat alone may similarly suffer from loss of appetite. This lack of appetite seems to be a subconscious protest against the existing environment.

Frequently one hears that the school child has no appetite for breakfast. This absence of appetite is often due to a fear that he will be late to school. Most of these children retire too late and get up late, and as a result feel it necessary to hurry in the morning. Lack of appetite for breakfast disappears if the child is sent early to bed and has more time in the morning. It may take some time for this desired change to take place, however, as habits of long standing are not changed in a day.

Parents Were Separated

Mildred, a malnourished little girl of eight observed by physicians and nutrition workers for several weeks, showed no improvement. It was learned through the social worker that the mother and father were separated and that the child and two sisters lived with the mother, the father living some ten blocks distant. Every now and then she would be missed; later she would be found at the father's shoe repair shop, although he always scolded her for coming. The family difficulty in this case seemed to affect this child more than her sisters who were of a less sensitive type.

At one time she was placed in a preventorium, but was so homesick that she was allowed to return home. As yet it has been impossible to improve the situation.

Rose, an overwrought girl of 10 years, went to bed any time between nine and twelve o'clock. She frequented the movies and lived in a land of romance and adventure. She suffered from night terrors and her mother stated that she ate very poorly. The mother was anxious about her condition and was quite willing to do whatever the physician advised. Movie attendance was limited; the child was required to retire at 8 p. m. and to have a rest period of one hour in the afternoon. Very soon night terrors disappeared and her appetite became normal.

No More Home Cooking

Another factor in the stimulation of appetite is home cooking. The day when the child saw tempting foods prepared, could smell the cooking and even lick the dish is on the wane. The bread comes from the baker, the can opener is in constant use, and there is a well beaten track between delicatessen and the home. Proper stimulation of the sense organs of sight, smell and taste are great aids in whetting the appetite.

The question of the appetite is not a simple one. The child may have no physical defects which directly or indirectly affect the appetite as would, for example, nasal obstruction; his dietary may be correct, with no sweets between meals; his general hygiene may be good; he may, nevertheless, eat poorly. If he has an abnormal reaction to food, watch the child to correct his nervous reactions.

Plain Facts about Health and Disease

HEALTH NEWS OF THE MONTH

The Treatment of Spastic Paralysis

Newspapers, during the past few months, have devoted considerable space to discussions of the work of the Australian surgeons, Drs. J. I. Hunter and N. D. Royle, who are now visiting the United States and who have been credited with the discovery of a surgical method which might prove to be of value in the treatment of paralysis.

Such forms of paralysis as exist in paralysis agitans or shaking palsy, congenital forms due to injuries at birth or anomalies of development, the paralysis due to progressive diseases of the brain and spinal cord, and that following hemorrhage into the brain have been mentioned as particularly likely to yield to the operation. It is asserted by the Australian surgeons that in such forms of paralysis, there is unusual tone or tension in the muscles, and that the cutting of the sympathetic nerve supply to the tissue, which differs from the motor supply coming directly from the spinal cord, would modify this tension and permit normal movement of the limb.

Unfortunately, an extensive series of experiments made by a group of Chicago investigators, including Drs. A. B. Kanavel, Loyal Davis and L. J. Pollock, has failed to confirm the original observations made by the Australian physicians.

Numerous studies have been made on animals and operations have been performed on twelve human patients who volunteered for the purpose. The animal experiments seem to provide little warrant for the operation, and the results on the patients were largely negative.

The work is important since it yielded new facts regarding the manner in which these diseases occur and the functions of the tissues involved. However, the five or six severe forms of paralysis that have been mentioned, which heretofore have been considered incurable except through such recuperation as followed the natural recovery of the body, reeducation of the muscles, hydrotherapeutic methods and plastic operations on tendons, still must be considered as major problems of medical science.

California Beauty Doctors

Perhaps the development of the movie industry in Hollywood is responsible for an epidemic of beauty doctors in that state. In any event, the executive officer of the state board of medical examiners in California, Dr. Charles B. Pinkham, has just issued a warning against persons who advertise their ability to "remake the face" and against persons vaunting their ability before the public, including not only licensed physicians and surgeons, but also representatives of all of the various cults.

One beauty specialist and naturopath, now under indictment for murder at Los Angeles, has been under investigation by the board, Dr. Pinkham reports, since 1921, when her license was revoked after she had been charged with murder in connection with the death of her son-in-law on whom she had performed various beauty operations.

Painless Childbirth

During the past month, two reports of investigations as to painless childbirth have been given wide publicity. One of these concerned a method which involved the injection of a new narcotic drug—a modification of an old preparation—into the blood, and the other a system of anesthesia, involving the use of ether by rectal injection and narcotic drugs administered simultaneously by mouth. Both methods are experimental, and on the whole must be considered as purely hospital methods at this time.

The quest for some manner in which woman may be freed of the travail associated with childbirth goes on intensely throughout the world. With such a concerted attack, it would seem that sooner or later some approved and simple method will be forthcoming. M. F.

PNEUMONIC PLAGUE

THE severe outbreak of pneumonic plague now causing concern to health authorities in Los Angeles is the first outbreak of this condition to appear in the United States since a minor epidemic in Oakland, Calif., during August and September, 1919. Plague occurs in three forms

—bubonic, septicemic and pneumonic; the latter is the type now present in Los Angeles.

The bubonic type of plague is spread primarily through the agency of the flea and the rat; pneumonic plague is more likely to spread from man to man, since the organism that causes the disease appears in enormous numbers in the sputum. In the Oakland epidemic in August, 1919, there were thirteen cases with twelve deaths, and it was possible to trace each of the cases to some contact either with the man first affected or with other persons who had been in contact with him. For a number of years, plague infected rats and ground squirrels have been occasionally encountered in California, and the human disease is known to have occurred in recent years in parts of Mexico, notably Vera Cruz.

The greatest recent epidemics of pneumonic plague have occurred in Manchuria, where there were 60,000 deaths during 1910-1911. There were 10,000 deaths in the epidemic of 1921.

The sufferer with this disease usually has intense headache, high fever, pain in the chest, shortness of breath and a cough with a bright blood stained sputum. The infection is severe, so that the patient dies within two or three days. Antiplague serums and vaccines have been of little or no avail. It is believed that the condition tends to spread more rapidly in climates that are moist and rather cool, so that the bacteria are not killed by rapid drying in the open air.

The disease is best prevented by quarantine and isolation of all patients by proper methods of disinfection of their sputum, and by disinfection of persons coming in contact with them.

In an epidemic that occurred in Harbin, China, in 1920, all persons coming in contact with patients protected themselves against the disease by wearing a special costume consisting of mask, overalls, a hood, high boots, rubber gloves and closely fitting goggles, worn outside the hood. On coming away from contact with the sick, attendants removed this apparel and exposed it to the sunlight and open air. In the evening they disinfected their clothes with formaldehyd, and sprayed their boots with an antiseptic solution. They also used an antiseptic gargle, washed their hands in an antiseptic solution, and bathed their bodies morning and evening.

The plague situation on the Pacific Coast is serious, but does not call for hysterical alarm. Sanitarians have long known that the danger of such an outbreak as that at Los Angeles was never altogether absent.

The fullest publicity is always desirable in such an emergency. In 1900, the governor of California undertook to establish by proclamation the fact that the plague did not exist in California, but he was not markedly successful.

As late as 1920, a writer in one of the Los Angeles papers thus expressed himself: "There is no more danger of bubonic plague becoming epidemic in a climate like that of California, where people are cleanly, than there is of seeing cactus sprouting on cement sidewalks."

The intelligent human being, when he knows all the facts, will usually prefer to face them soberly, rather than to deny their existence and shut his eyes to a possible danger. Full publicity is the first duty of local authorities, both to their own citizens and to the country at large.

M. F.

FIFTY YEARS OF MEDICINE

FEW persons realize that most of the instruments of precision used in the diagnosis and treatment of disease have been invented or discovered within the last fifty years. Recently Sir David Ferrier, in an address at the opening of King's College Medical School, London, contrasted the methods followed fifty years ago with those now employed.

In 1874 Lister had scarcely begun the use of the carbolic acid spray in connection with his surgical operations, based on Pasteur's doctrine regarding the germ theory of fermentation. Surgical operations were then limited in their range and were followed by a frightful mortality. Suppuration of wounds was looked on as a matter of course, and surgeons had no conception of the danger in operating with unsterilized instruments and in garments by which germs were transferred from patient to patient.

Pathology was then practically nonexistent. Nothing was known of the methods of culture of the germs of tuberculosis, cholera, anthrax, malaria, diphtheria, tetanus, typhoid, syphilis and others. The only vaccine was that in use by Jenner to protect against smallpox. Aside from this, there were no prophylactic or curative serums or substances, such as those now so effectively used against hydrophobia, syphilis, diphtheria, tetanus and typhoid.

Nothing was known in regard to internal secretions and vitamins and their marvelous influence on development, growth and nutrition, or of biochemical tests, such as those of Widal and Wassermann. Aside from the stethoscope, the ophthalmoscope, the laryngoscope and the clinical thermometer, there were practically no aids in clinical investigation, such as are now

provided by the x-ray, the manometer, the sphygmograph and the electro-cardiograph. The remedies used were purely empirical and little or no reason for their use could be given other than that they had "been found useful" by the physicians or their predecessors.

It must be remembered, however, that in the use of their powers of observation, unaided by other than the most simple instruments of precision, many of the physicians of old have not been surpassed in their delineation of the symptoms and history of diseases and in skill in diagnosis. Sydenham, Heberden and Laennec, as well as our own McDowell, Sims and others, were masters of diagnosis so far as current knowledge permitted.

Although great victories have been won over many of the common diseases, there are many difficulties that still confront us. Cancer, the disease most prominent in the public mind today, instead of being conquered appears to be increasing in frequency as civilization advances. The improvements in our medical schools and the larger number in which efficient medical research is being carried on, give promise that other great discoveries will be made. The path of such advancements, however, is one that is not entirely strewn with roses.

In Lister's time, there were those eminent in the profession who shook their heads incredulously or expressed their entire disbelief in the germ theory of sepsis, and even now, in spite of the many demonstrations of the great value of diphtheria antitoxin, typhoid vaccines and other prophylactic or curative serums, there are many—and these are not limited to ordinary ignoramuses or cult enthusiasts—who claim to disbelieve in these clearly demonstrated facts.

Future progress will depend largely on experimentation and particularly on medicobiological research, but even here, instead of generous support, there is certain to be much ignorant and active opposition. Nevertheless, those who understand will cling to scientific methods and make use of all known fields of pure science by which aids to medical research (some of them unexpectedly) will lead to definite results.

N. P. C.

HOW ABOUT TAKING BABY TO THE MOVIES?

MANKIND has always been gregarious. Our age-long living in cities, our schools, churches, theaters and other places of congregation give proof that in the evolution of man meetings of one kind or another have always been popular. Defoe depicts in "Friday" in the story of "Robinson Crusoe" what might happen to an individual if communication with the outside world were cut off for some length of time.

In the daily grind of strenuous American life no one is harder pressed than the mother—the young mother who must do her own housework. Not infrequently her sole source of diversion is the hour or two she spends in the movies, often with her restless child on her lap.

The collection of baby carriages and carts parked in the lobby of any movie in the afternoon or early evening is mute evidence of the fact that many young mothers are thus attempting to break the drudgery of a monotonous day. These mothers sincerely deserve relaxation, but the thing to be encouraged is that the child be left at home. Doubless no one is more entitled to the mental relaxation and diversion that an afternoon performance will furnish than mothers of young children. The fact that these mothers have taken their little ones along means one of two things: (1) they have no one with whom their children could be safely left, or (2) they are afraid to leave their children at home alone.

The weary mother really gets little relaxation with a squirming or restless infant on her lap, and mindful of the imminent unpopularity that awaits her if the child cries, she heeds his every whim. Both would be better off if the baby stayed at home.

Children of the runabout age are not infrequently tempted with popcorn, ice cream and candy during the intermission. Every one knows how these things not only pervert their appetites, at least for the following meal, but also not infrequently cause stomach upsets and diarrhea. From an educational point of view no performance is of any value to any child under twelve years unless it is especially arranged to instruct or entertain children.

As far as the danger of contracting infections like measles or whooping cough is concerned, it is most difficult to compile accurate data. Doubtless the dangers of getting such diseases is far greater at baby "shows," children's parties and picnics. There is, however, a real danger from the health point of view, and that is the danger of contracting colds from drafts and dust. The temperature in the theater often varies greatly from the prevailing outdoor temperature, and this is an added factor in catching colds.

If, then, we admit that it is very beneficial for the young mother to get away for a few hours in

the afternoon or evening once or twice a week, who should look after the child?

If there is no fond grandparent who can be entrusted with the baby during these few hours, then two or more neighbors can form a mutual arrangement whereby their children can be watched by one of them while the others have a good time. If this proves impractical, a friend or responsible neighbor or janitress can doubtless be found who would gladly assume the burden for a reward such as a cake or a glass of jam. Possibly a Christmas or birthday present would win such favor.

By leaving her child in capable hands, the mother can get not only increased joy and relaxation out of her diversions, but added vigor and a broader point of view which will help her in assuming her responsibilities. She can inform the baby's temporary guardian of the theater she plans to attend so that she can be paged if it becomes necessary. The old adage, "Too much work and not enough play will make Jack a dull boy," applies to Jill as well.

L. W. S.

TRAINING TUBERCULOUS VETERANS FOR NEW JOBS

WHEN, after the war, the rehabilitation and retraining of the disabled soldier was undertaken by the government through the federal board for vocational education, it was fortunate indeed that the board was able to command at once the services of many existing institutions. The Reco workshop of the New York Tuberculosis Association was one of the agencies which was called on to render service of this sort. Its service was discontinued September 1, because the Veterans' Bureau is now able to furnish instruction and retraining.

The experience of the Reco Workshop with 291 tuberculous men who were admitted to training during the four years of this work is interesting. Two hundred and twelve, or 64 per cent., discontinued before the end of the full course. Of these, thirty-three men suffered a return of active tuberculosis; 108 others discontinued treatment at their own request, and in the remainder there was lack of mechanical aptitude, of interest in the work, or of willingness to comply with the necessary discipline of the institution.

Jewelry making, watch repairing, and cabinet making were among the vocations selected by these soldiers, and the average time required for each student was twenty-eight months.

It was possible to keep these men in satisfactory physical condition during the period of training. In sixty of the 291 patients the disease became arrested while only 12 per cent. broke down from the pre-existing tuberculosis.

Although this Reco workshop in Long Island City has been discontinued, the New York Tuberculosis Association continues to maintain its vocational service for the placement of its civilian sanatorium graduates and other arrested cases of tuberculosis.

It is hardly necessary to remark that the amount of such work and training must be carefully adjusted to the physical condition of the individual from day to day.

J. M. D.

THE HEALTH ASSOCIATION AND ITS MEDICAL SERVICE

ONE of the most significant and gratifying signs of the times is the growing appreciation of the value of health among large industrial groups. Evidence of this is found in Mrs. Binder's article, "Labor's Crusade for Health."

The activities of the employer group looking to better health conditions for their workers are being supplemented (in some cases supplanted) by organizations of the employees themselves. The efforts of these health bureaus are directed largely toward preventive as distinguished from curative measures.

In the employment of medical men for the service of preventive medicine, attention should be called to a serious danger which has been incurred by health associations in foreign countries. That danger is the attempt to secure such service at the lowest cost with little or no regard to its quality.

Any scheme that seeks to obtain medical service by engaging the "lowest bidder" among the doctors of the community will prove disastrous to the sick and injured beneficiaries of the association. The plan of paying for such service in a lump sum per month or year, without regard to the number of patients seen or the total service rendered, is especially vicious. The physician is entitled to compensation commensurate with his skill and training and the amount of time and money involved in fitting himself for his profession.

We get, in this world, in goods or service just what we pay for, as determined by the accepted standards prevailing at the time. Any organization or individual attempting to obtain professional service for much less than its real market value is sure to be the loser.

The independent practitioner, whose income is dependent on his fees for individual services, has a constant incentive to sustain effort and

study to keep himself abreast of the newest and best methods in medicine. Many forms of contract practice remove this incentive and, were they to be generally adopted, would lead to the deterioration of medical service.

The best medical service is to be had by any health association or bureau and, with most satisfaction to its members, when the arrangement is such as to give each member the service of the physician of his choice, allowing for that service a reasonable compensation. J. M. D.

BOILING FOR THE DESTRUCTION OF THE BOTULISM POISON

THE statement that boiling for five minutes will destroy the poison of the B. botulinus has been widely published and, as such, it needs further explanation. It is perfectly true that boiling for five minutes at 212 F. will destroy the poison, provided, however, that the poison is in a watery solution and in the chemical test tube. If vegetables are contaminated with the toxin or poison, then other factors enter into the subsequent detoxification.

One of these factors is the consistency of the vegetable, as the heat desired penetrates different vegetables at varying lengths of time. It takes longer to reach 212 F. in the center of a pot of corn or spinach than it does to reach the center of string beans. The size of the container also plays a most important rôle in the boiling process to destroy the poison. Likewise, altitude of the surrounding country makes its importance obviously manifest because, for instance, 212 F. at sea level is approximately 205 F. in Denver and the boiling process must be correspondingly longer.

With the foregoing facts in view, it is now advocated that to destroy the poison of the B. botulinus in food, it will be necessary actively to boil the food for thirty to forty minutes before serving.

As the danger of botulism from canned foods is relatively in proportion to the heat process used for their preservation, it may be necessary to touch briefly on this subject. There are, broadly speaking, two types of canned foods—home and commercial. Until recently both types of canning used widely divergent heat processes. Home canners usually advocated the so-called and totally inadequate cold pack process for vegetables and meats. Recently, however, the Bureau of Home Economics, U. S. Department of Agriculture, published Circular No. 24 which contains safe processes but blithely ignores the cold pack process sponsored by the same department.

Until the processes in Circular No. 24 supersede the cold pack process, all vegetables and meats processed by the latter method (cold pack) particularly in western states, are unsafe unless previously boiled for 30 to 40 minutes before serving. Commercially canned vegetables and meats, other than ripe olives and spinach, appear to have been made safe by proper processes and undoubtedly steps have been taken to make olives and spinach safe. Should vegetables and meats be processed by safe methods then boiling subsequent to serving is an unnecessary precaution.

In the majority of outbreaks of botulism, the preserved foods have been noted to be visibly spoiled. This spoilage may be a relative matter as the containers can be normal in appearance and the disintegration of the contents so slight that no abnormal odor or taste is detected. Spoilage as to odor and appearance is, therefore, a decidedly doubtful criterion in botulism.

Fruits and the acid vegetables, such as tomatoes, either home canned or commercially canned, are ordinarily safe because of the acidity which is usually present.

The organism, B. botulinus, is known as the most heat resistant of the pathogenic bacteria. Certain strains of spores of the B. botulinus have been known to resist boiling for several hours at 212 F. at sea level. The spore as it exists in nature is not in itself poisonous. The poison is produced in the can or jar when growth or reproduction of the organism occurs.

Only when the chemical reaction of the food is neutral, not too acid nor too alkaline, will the spore grow. Growth has never been known to occur in brine solutions of sufficient strength, in condiments like ketchup, or in saturated sugar preserves or jellies.

The majority of the outbreaks of botulism have been due to underheated or underprocessed foods. It is fundamental that methods of canning must insure sufficient heat penetration and make allowance for altitude and the chemical reaction of the product. Sanitation, by means of the thorough cleansing, proper storage and use of fresh products, is essential as a protection against botulinus spoilage.

Finally botulism is comparatively a rare disease in the United States. Outbreaks that have occurred have averaged about fifteen in number each year. One hundred and thirty-six outbreaks have been reported with 463 cases and 314 deaths, giving a case mortality of 67 +. Ninety eight per cent. of the outbreaks occur in western states in which soils show considerable contamination with the spore of the B. botulinus.

J. C. G.

Tom's Christmas

By FLORENCE LEININGER

WHILE the dozen children at the Nutrition Camp got ready for their afternoon nap, they talked excitedly about the new boy who was coming that day. Nurse Henry had said that he was the same age as Benny. And his name was Tom. He was to have the bed next to Benny on the big, airy sleeping porch, where the children slept at night and for two hours every afternoon.

"He'll be here when we wake up at four o'clock," sang out Mary. "I wonder whether Miss Nelly will take him walking with us."

"Sure," called Benny; "go to sleep."

With Nurse Henry, when she came out at four o'clock carrying a dozen big glasses of milk, was a little boy with very red hair and very blue eyes, who looked as if he needed every bit of the milk for himself.

"Children, this is Tom. Help him to have a good time when you go to the park this afternoon."

Then Nurse Henry led Tom over to his bed beside Benny's and said to him: "This is where you will sleep twelve hours of each day. The fresh air will make you hungry for lots of milk and good food."

"How much do you weigh, Tom?" asked Benny.

"Fifty pounds and I'm nine," answered Tom.

"Oh, I'm nine, too, and I weigh sixty pounds," boasted Benny. "But I'm a lot taller than you," he added when he saw that Tom looked troubled. "Anyhow, you'll gain fast here at the Nutrition Camp. I didn't weigh as much as you when I first came. Now I drink six glasses of milk a day, and one week I gained three pounds."

Just then Miss Nelly appeared to take the children walking in the park. "We have school in the mornings, and Miss Nelly is our teacher," Mary explained to Tom in a loud whisper.

They all went down by the lake, and the children showed Tom their favorite trees—the fine old oak which they called "Peter," and the lovely tall pine which Mary had named "Titania" because, she said, she was sure the Queen of the Fairies lived in its branches. Then they played drop the handkerchief until it was almost time for supper.

On the way back Mary said to Tom, "Our fathers and mothers can visit us every Sunday. Are yours coming tomorrow?"

"I haven't any," said Tom; "they both died last winter."

"Who took care of you after that?"

"I took care of myself. I slept on a cot in Dave's room; he works at the mill where my daddy used to work."

"Maybe Dave will come to visit you on Sundays," said Miss Nelly.

"I guess not," answered Tom.

The next day at four o'clock many of the children's relatives came to see them, and there was a merry party in the big playroom. Nurse Henry saw Tom all alone and called him over to her corner. "How do you like it here with us, Tom?" she asked him.

"I like it fine"; and Tom meant it.

"I'm going to let you talk with Benny's mother," Nurse Henry said, leading him over to Mrs. Brown. "Mrs. Brown, I want you to know Tom. He's our new boy, and he is your Benny's twin in age, if not in size. Their birthdays come on the same day."

Mrs. Brown and Tom had a long talk together, and when she left she said to him, "Goodbye, Tom, I'll come to see you and Benny again next Sunday."

The next week when the children were weighed Tom had gained two pounds. "I'm going to gain every week," he said; and he did. He was having a happier time than he had had for over a year.

That week Nurse Henry decided that Alice and Frank had reached their normal weight. They knew what foods were good for them, and how much milk to drink each day; so they were allowed to go home, and other children took their places.

On the Sunday a week before Christmas, Nurse Henry came in while Benny and Tom were telling Mrs. Brown about their plans for the Christmas tree the children were to have in the big playroom. "I think both these boys are going to be ready to go home very soon after Christmas," said Nurse Henry to Mrs. Brown. Benny's face beamed, but Tom looked frightened. He slipped away by himself, and did not care for any supper that evening.

The next day Tom told Nurse Henry that he didn't care for milk any more; would she please not ask him to drink it? Nurse Henry smiled at Tom and said that he might go without his milk until after Christmas; then he would be ready to drink it again, she thought.

Tom did not eat much that week. Sometimes he did not eat as much as he wanted. And when the children were weighed the day before Christmas he had lost a pound. He looked pleased. Nurse Henry didn't say anything, and every one else was too much excited about the Christmas tree to think about Tom's weight.

The children had made gifts for each other; to put on the tree. Tom liked to draw and paint; he had made a picture of the lake in the park for Miss Nelly, and one of Peter the oak for Nurse Henry.

No one went to sleep that afternoon, although the children spent their usual two hours in bed. They were to have an early supper and then the tree. At the table they were too much excited to eat.

As soon as Miss Nelly went to the piano, the children ran into the playroom, made a ring around the tree, and sang their Christmas songs. Then Nurse Henry lighted the candles, and in came Santa Claus with bells jangling.

"Benny! It's Benny!" shouted the children.

He began distributing the presents. Each boy had a pretty tie and a pair of mittens. And every girl had a little purse with a gay colored handkerchief tucked inside. Besides this, every one had toys and candy and nuts. Little Joe had a small furry rabbit, which took great leaps across the floor when any one pressed the ball on the end of the string which was fastened to his tail.

Last of all Santa Claus brought Tom a white envelop.

"Open it, Tom," said Nurse Henry.

Inside was this letter:

Dear Tom: When you are ready to leave the Nutrition Camp I would like to have you come and live at our house, and really be Benny's twin brother. Will you come? MRS. BROWN.

Tom's eyes were shining as he showed the letter to Nurse Henry. "Now, I'll drink my milk," he said. "I didn't want to gain last week because I was afraid I would have to leave the camp. But if I can live with Benny and Mrs. Brown—."

"Hooray!" shouted Benny. "I like this Christmas!"

When the Sandman Comes Around

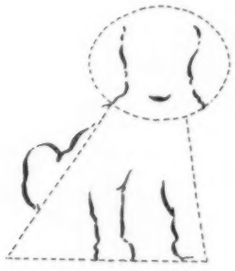
BY JOHN T. LEMOS

Plenty of sound sleep makes bright eyes and round faces. Even the birds and animals know that sleep makes them feel good. Look at the jolly smile on the fat little lad from Healthy Land. Take your pencil and see if you can draw some of these Healthlanders.

In Healthy Land,
I've heard it said,
They never hate
To go to bed.

Because they know
That lots of sleep
Gives energy
That's hard to beat.

Birds tuck their head
Beneath a wing,
And sleep away
Like everything.



And fat young puppies
Play away
From early dawn
Till close of day.

But when night comes
In Healthy Town,
They give three barks
And turn around.

Before you'd even
Say "Bo Peep",
Those gay young pups
Are fast asleep.

In Healthy Land
They have such fun
That when the busy
Day is done

The children there,
I've heard it said,
With joyous whoops
Troop off to bed

And when the Sandman
Comes around,
They're all asleep
In Healthy Town.

HEALTHFUL BEAUTY

IF YOUR FACE AND HANDS CHAP

This is the first of a series of short discussions of beauty questions by medical specialists, such as will appear regularly throughout the coming year. Readers may feel free to suggest beauty topics for authoritative and scientific discussion in these columns and to submit questions relating to beauty for answer by recognized authorities in medicine. Write to "Healthful Beauty," HYGEIA, enclosing a two-cent stamp.

PERHAPS you have one of those sensitive skins that roughen and grow tender when the winter season comes. Your hands and face take on a pinkish hue, roughen and even crack in the areas in which there is much motion, such as the wrists, fingers and around the mouth.

Chapping is the way the skin has of expressing its reaction to irritation, and it occurs in winter for several reasons. The first of these is that in winter the air is dry and the skin glands are relatively inactive. As a result of the dryness of the atmosphere, the moisture of the skin evaporates quickly.

Cold weather lessens the activity of the skin glands—the fat and the sweat glands which lubricate the skin. The natural fat of the skin that these glands secrete is absolutely essential to its durability and resistance. When it is lacking, the skin becomes inelastic, friable and much more sensitive to external irritants than when the fat is present in abundance.

The combination of dry air and inactive glands may be sufficient in sensitive skins to produce chapping without any irritation except that of exposure to the cold dry air and the ordinary external contacts which it is the skin's function to meet.

Soap and Water Cause Chapping

However, chapping is most frequently excited by the use of soap and water, or even water.

Frequent immersion of the hands in water, with or without subsequent drying with a towel, is somewhat irritating to the skin. If you add soap, it is still more irritating and abstracts more of the skin fat. The result is that soap and water are usually the exciting cause of chapping and their continued frequent use, without care, makes the condition worse.

Use of soap and water should be avoided as far as possible. When they are used the hands should be thoroughly dried immediately afterward with a soft towel.

The other sensible thing to do is to apply a bland grease to make up for the loss of skin fats. This can be done by using any of the ordinary bland ointments. Cold cream is perhaps the best. Vaseline is almost as good.

To prevent chapping, the predisposed parts should be greased habitually once or twice a day. Where the condition actually exists, cold cream or vaseline should be put on freely at night and very lightly once or twice a day.

The same effects may be obtained by using glycerin diluted in water. By moistening the hands with dilute glycerin, say one ounce in three ounces of water or rose water (the plain water is just as good), you leave a thin film of glycerin on the surface. Glycerin has a strong affinity for water. The result is that this film of glycerin supplies the skin with a thin layer of moisture by abstracting it from the air.

As a preventive of chapping, dilute glycerin solutions are convenient. For the cure of actual cases it is much less effective than cold cream.

Along with these measures, gloves should be worn out of doors and the face should be protected by high collars or soft mufflers from too much exposure to cold air, particularly winds.

Powder Puffs

To the Beauty Department:—I should be glad of information on powder puffs, the effect on the skin of using soiled ones, the relative effect of a powder puff and loose powder, and the compact.

J. A., New York.

Answer.—The injurious effects of face powder depend entirely on the constituents of the powder. Some of them contain poisonous drugs which, when used, produce systemic effects and cause irritation. Even rice powder has proved irritating to the eyes of some persons.

The powder puff as ordinarily used is a possible source of trouble. It soon becomes dirty and looks "like something the cat brought in." Powder should be applied with bits of soft cloth or absorbent cotton, each of which is discarded after being used once.

Itching After Bath

To the Beauty Department:—Will you be kind enough to let me know if there is a safe and successful treatment for itching of the skin after taking cold or lukewarm water baths? The itching causes no irritation or any mark whatsoever, but causes nervousness and almost desperation for about an hour. Soaps do not seem to have anything to do with it.

E. H. G., New York.

Answer.—Itching after bathing is thought to be due to the irritation of the skin by change of temperature or by the water itself, or by a combination of both. As a rule persons who experience this trouble have a skin that lacks sufficient oil. The condition is very resistant to treatment, but the use of bland oils such as olive oil or liquid vaseline or cold cream occasionally is helpful. Baths should be taken as infrequently as possible, and if only cold or lukewarm water excites the itching, hot baths should be taken instead.

HEALTH NEWS AND VIEWS

THE CHRISTMAS STAMP

The scene of action is in the village post office. The postage stamps snub the Christmas stamp, but in the end shamefacedly admit its greatness.

This is the basis of a fairy story, "The Christmas Stamp," which appears in the Christmas greeting of the National Tuberculosis Association. The greeting is prepared in honor of Einar Holboell, the originator of the Christmas seal, the sale of which has contributed millions of dollars for the campaign against the great plague, tuberculosis.

The Christmas stamp story, of course, is an appeal to children. This is most fitting since children are among the greatest sellers of the Christmas seals and receive the greatest benefits through their sale.

The Modern Health Crusade, the great nationwide organization that has done so much to teach children proper health habits, is supported by the proceeds from Christmas seal sales.

Preventoriums for children with beginning tuberculosis or a tendency toward the disease receive support from the annual seal sale.

Educational propaganda, free clinics, hospitals and sanatoriums, all of which have helped steadily to lower the mortality rate from tuberculosis, receive funds from the sale of Christmas stamps. Small wonder then that the postage stamps were compelled to admit the greatness of the Christmas stamp.

MUST OPERATE GAS STOVES WITH CARE

The appearance of the "radiant" type of domestic heating stove adds much to the danger of deaths and partial asphyxiations from carbon monoxid gas, it is said by health authorities. Smithsonian Institute Bulletin No. 102 declares such stoves are likely to produce carbon monoxid gas whenever the radiants glow over three fourths of the distance from bottom to top.

A slight increase in gas pressure, such as usually occurs at night, may easily change a stove operating innocently enough in the daytime to a carbon monoxid generator at night.

The keen competition among makers of gas stoves results in constantly cheapened products, Dr. Carl Puckett of the Oklahoma department of public health points out, and this brings added danger. Distributors and retailers in many instances, he declares, are said to remove the warning labels attached by the manufacturer. These labels proclaim the danger unless the devices are adequately ventilated when set up.

Gas companies have spent thousands of dollars in educational campaigns on the correct use of the gas cooking stove and point out that burners should be set at least one inch below the top of the grid.

VITAMIN CONTENT OF COD LIVER OIL

While cod liver oil has about the same caloric value as other pure fats, its vitamin content is much greater than the same quantity of butter, cream or other of the usual fatty articles of diet. It is for this reason that it is so valuable in infants with a tendency to rickets.

A teaspoonful of cod liver oil is said to contain as much of the fat soluble vitamin as a pound of the best butter. Its food value, therefore, in relation to this vitamin is unique and places it in a class by itself.

YOUNG BUSINESS WOMEN OFTEN UNFIT FOR MOTHERHOOD

Lack of exercise on the part of the young business woman is seen as one cause for the high death rate among mothers and young babies, by nurses of the Royal New Zealand Society for the Health of Women and Children (commonly known as the Plunket Society).

"For the most part our present-day school girl is fairly fit physically, owing to outdoor exercise and sport," says a Plunket nurse in the recent annual report of the society. "But most of those who join the ranks of business wage earners fall off seriously after leaving school.

"These young women spend eight hours of their day either in office, factory or workroom, and when away from business they make no attempt to keep up good habits as to fresh air and exercise. They nearly always take a tram-car to and from business, and spend their leisure time indoors.

"The result is that almost invariably in a few years they suffer from constipation and general lack of muscular tone and fitness. This is the state in which most of our young wage-earning women enter on motherhood, and accounts largely for their tendency to slow recuperation from their first confinement."

Plunket nurses had 35,186 babies under their care during the last year, of whom 13,028 were new cases.

HEALTH AND POPULATION

What effect the health movement will have on the population of the future is to be discussed by Prof. S. J. Holmes of the University of California at the annual meeting of the American Statistical Association to be held in Chicago, December 29-31.

The entire three day session is to be given over to the discussion of the population problem in America.

Influence of child labor restrictions on population by Miss Grace Abbott of the Children's Bureau, the management of unemployment and its bearing in the population problem, the family wage and future population are a few of the subjects for discussion which are of interest to all persons concerned with health and public welfare.

WHY ARE CHILDREN BAD?

Delinquent children are usually under par physically. This is shown by a study made in New York of 743 children brought before the children's court. Examination of these children indicated that the physical condition of delinquent children in general is much inferior to that of ordinary school children.

Seventy-nine per cent. of the children before the court had physical defects, while only 35 per cent. of public school children living in the same districts and of the same ages and nationalities had defects. The chief difference between the two groups so far as physical conditions were concerned seemed to be in nutritional and glandular disturbances.

Underwood & Underwood

AUTO SPEEDERS VISIT CRIPPLES

"Go and view the human débris in the home for crippled children," a Chicago judge ordered a number of automobile speeders recently. The patrol wagon was waiting, and the offenders were borne to the crippled children's home, where they saw the too frequent consequences of excessive speed.

STOCKS STILL PREVAIL

Humane methods of treating criminals have not gained great headway in China, if we may judge from this prisoner chained to the Peking stocks. He sits on a rock worn down by generations of wrong doers.

Pacific & Atlantic

Underwood & Underwood

HELPING SANTA CLAUS

Lucy is crocheting a Christmas gift, as she lies in the Hospital for Ruptured and Crippled, New York. She is strapped flat on a hard curved board and is unable to move anything except her arms.

International

"TOUGH SLEDDING?"

"Not a bit!" That is the answer of these tuberculous children at the J. N. Adam Memorial Hospital in Perrysburg, N. Y. Their bodies are so hardened to sunshine or cold that summer or winter is all the same to them.

Pacific & Atlantic

CENTER, FORWARD!

Frosty weather and hockey agree famously. No one except the goal keeper need ever suffer from the cold. For the robust girl there are few better games than hockey.

AN END RUN

This has been a brilliant season in football history. Several small schools showed unexpected strength and gave the big elevens something to remember.

Pacific & Atlantic

UNVACCINATED ARE A MENACE IN INTERSTATE TRAVEL

The one thousand persons who have died in this country of smallpox within the last two years might still be alive if they had been vaccinated or revaccinated, Surgeon General Hugh S. Cumming of the U. S. Public Health Service points out in a recent letter sent to health officers of the various states.

In order that the federal government may not be forced to interfere in interstate travel in case of an epidemic, the surgeon general calls upon state, county and city authorities to start immediate campaigns to secure vaccination or revaccination of all persons who have not been recently successfully vaccinated. Says Surgeon-General Cumming in his letter:

"The increasing number of cases of smallpox and the continued spread of this disease from city to city and from state to state will, if not checked, not only augment the number of victims but may bring about a condition which would seriously interfere with the movements of passengers on trains, steamers, automobiles, and other carriers. It is conceivable that this interference might be of a degree that would involve the expenditure of hundreds of thousands of dollars in quarantine, a contingency which might easily be avoided provided our people can be induced to protect themselves by vaccination and revaccination.

"The Public Health Service is being importuned at the present time to exercise its authority in enforcing interstate quarantine to prevent the migration of the unvaccinated when there is danger that these persons may have been exposed to smallpox.

"Vaccination and revaccination being a perfect protection against smallpox, it might be argued that protection against the disease is a matter which should be left to the discretion of the individual, but there is no more reason for leaving the defense against an enemy of the state, such as smallpox is, to the discretion of the individual, than there would be in leaving the defense of the state against an armed invading force, to the individual. These enemies are equally dangerous.

"Furthermore, there are a large number of persons who are otherwise good citizens, who, because of indifference, carelessness, and lack of information, and oftentimes because of having been deceived by false propaganda and deliberate misinformation, either fail or refuse to protect themselves and their trusting but helpless children until it is too late.

"These same children of misinformed or irresponsible parents, being too young to judge for themselves, are entitled to the protection of the state, and certainly the state is derelict in its duties if it allows such unprotected children to be exposed to smallpox."

NURSES MUST PRACTICE WHAT THEY PREACH

Nurses of the Chicago Tuberculosis Institute are being required to practice what they preach in the way of health examinations.

Those nurses under the supervision of Mrs. Palmer of the southern district of Cook County must have a complete physical examination, and a careful record is being kept of the findings.

"Certainly a nurse above all others should be watchful of her own health and should be strict about keeping it up to the standard," says Miss Jane Hufford of the Institute in announcing the new movement.

"Chicago Tuberculosis Institute nurses are doing a great deal to persuade people to have a periodic examination and to remember that 'Keep Well Beats Get Well.' For this reason they can do nothing better than to give evidence that they practice what they preach."

TYPHOID BACILLUS KILLED BY FREEZING

Many textbooks on bacteriology and hygiene state that the Eberth bacillus, which is the cause of typhoid fever, resists freezing for a considerable time. The authors, in support of the statement, quote the observations of Taylor, in connection with the historic epidemic of typhoid fever that occurred in Plymouth, Pa.

A series of experiments conducted in the laboratory of bacteriology at Lehigh University during the past year, and reported in *Science* by Mr. W. A. Kreedler, seems to show that this statement is not correct. When grown in artificial media (water, with sterile and normal feces) no growth could be obtained after freezing for three weeks. The same results were obtained with paratyphoid bacillus.

While it is not possible in the laboratory to imitate perfectly natural conditions, it would seem that organisms which had been grown in laboratory cultures for several generations would be more resistant to freezing under the conditions of the experiment than would bacilli freshly developed from a living patient, and highly virulent.

Professor Thomas, in whose laboratory this work was done, believes that the Plymouth epidemic, the early cases in which were very severe and the mortality high, was due to a fresh and vigorous strain of bacillus, deposited at or after the time of the spring thaw, and not to bacilli which had been frozen for any length of time.

The question as to whether typhoid and paratyphoid bacilli are killed by freezing is of great importance in relation to the use of ice from contaminated water.

HIGHWAY ACCIDENTS ON INCREASE

More than 22,500 persons in the United States lost their lives last year in automobile, motorcycle and street car accidents, according to the estimate of the Department of Commerce recently made public. This is an increase of 3,418 fatalities over the preceding year.

The increase was largely due to the additional fatalities from automobile accidents. Even the 16,452 deaths charged against the automobile do not tell the whole story, as deaths resulting from collisions between automobiles and railroad trains and between automobiles and street cars are charged to the heavier vehicle.

Two thousand fatalities from such collisions in 1923 is a conservative estimate for the United States, according to Department of Commerce figures. If this figure and the fatalities from motorcycle accidents be added to the figure for automobile accidents, the final 1923 toll from motor machines on highways becomes 18,788 or 83 per cent. of all highway fatalities.

There were more than 2,250 train grade crossing accidents last year, Interstate Commerce Commission figures show.

MUST SWIM FOR COLLEGE DEGREE

Twenty-two colleges and universities are now said to require swimming for women. Cornell University, Rockford College, Syracuse University, Cincinnati University, Iowa State Agricultural College, University of Wisconsin, Wells College, Western Reserve, Wooster College and several others refuse to grant degrees to students who fail to meet fixed swimming requirements.

The most frequent swimming requirement for graduation is to be able to swim 50 yards. One school requires its woman students to swim 120 yards and to dive. Two years of instruction in swimming is a common requirement.

QUESTIONS AND ANSWERS

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a two-cent stamp. If the question is of general interest, the answer will be published; otherwise it will be sent by mail. Questions are submitted to recognized authorities in the several branches of medicine and answers framed by them. The names of correspondents will not be published. Diagnoses in individual cases will not be attempted nor treatment prescribed. Answers to questions relating to beauty will be found in the "Healthful Beauty" department of this magazine.

Immunization

To the Editor:—Against what diseases should children be immunized? At what age for the normal child should the immunization be done in the case of each disease which you name.

J. A. McK., Texas.

Answer.—Vaccination against smallpox should take place during the first year of life unless there are special contra-indications; diphtheria as soon as possible after six months of age; scarlet fever, when the method becomes generally available, at one year of age; measles, in infants, immediately after exposure to the disease, using serum from convalescent patients.

In the case of diphtheria and scarlet fever, each child is first tested as to its susceptibility to the disease. A large proportion of children are found by the Shick test to have a natural immunity to diphtheria, and by a similar test to be immune to scarlet fever. Children found to be non-susceptible to either disease do not need to be artificially immunized. However, the tests should be repeated as the child grows older because this natural immunity is often lost.

Boxing

To the Editor:—I am very anxious to do a little boxing and fencing this winter, but I have an enlargement of the heart that has prevented my attending West Point. I am, however, in other respects in perfect health. My heart was affected by partaking in too much athletics so I am a little afraid of taking up the exercises before I receive your advice. I am employed at the Ritz-Carlton as a clerk and have no physical labor at all.

H. M., New Jersey.

Answer.—Probably it would do you more good than harm to box and fence in moderation. However, the fact that you were refused admission to West Point would indicate special precautions. The wise thing would be for you to take your exercise after examination by a competent physician and under his supervision. It is entirely possible for any one with a damaged heart to harm himself and probably to shorten his life by unwise exercise. Any such person should limit his exercise in accordance with the advice of his physician.

Marks on Finger Nails

To the Editor:—What is the cause of and remedy for white marks on the finger nails. I am 37 years old and apparently in good health.

M. S., California.

Answer.—Sometimes white spots on the finger nails are apparently caused by slight injury to the nail at its root, which is at the curved border at the opposite end from the finger tip. Too much manicuring seems to be the fault in some of these cases. The same effect may be produced at other times by the nervous habit of biting on the nails at the root, without actually producing any immediate injury.

Aside from these possible causes we know nothing about the cause of white spots on the nails and know nothing to prevent them or to get rid of them after they have occurred. As the nail grows out they grow with it and vanish at the tip of the nail. In the meantime, however, new white spots usually form and continue the process.

Hemophilia

To the Editor:—Hemophilia is the condition of our two small sons. A specialist advised a tonsil operation for our oldest boy and it was successfully performed by whole blood transfusions before and after. His general health has been wonderfully improved. At the time there was a new serum just on the market, to be taken internally and supposedly to cure. Naturally, we are very anxious to hear if that is true. We are totally unable to trace this trouble. I have always been normal and strong. There may be a slight tendency to bleed, but there was no hemorrhage in childbirth. Both my husband and I want more children. I cannot help feeling confident there will be a cure some day for such affliction and any information will be greatly appreciated.

R. V. S., Minnesota.

Answer.—The story of your children is typical of the usual history of hemophilia, that it is transmitted through the mother, not herself a bleeder, and appears almost always in the sons.

We know of no new serum for this purpose. The fact is that human blood which was used in your son, we presume from the father or from yourself, is far and away the most satisfactory corrective of the bleeding tendency. Of course, it is customary to test the blood of the donor (the person from whom the blood is taken) with that of the bleeder to whom it is to be administered, but usually some near relative, like the father, proves to have the most satisfactory blood for this purpose.

Blood serum of the horse, hog or some other animal is sometimes used where human blood is not to be had, but is not nearly so satisfactory. There are also preparations on the market which promote coagulation of the blood, but they are not so satisfactory as human blood or blood serum.

It is not usual for all the children in a family, or most of them, to be bleeders, even though there is a hereditary tendency. We should feel, therefore, that you might expect that other children born to you would be free from this trouble.

Birth Mark

To the Editor:—We have a baby girl, 10 months old, with a birth mark on her forehead. I will try to describe the mark and give its location as best I can. The doctor says it is small blood vessels. The color is red, and is not so very noticeable except when she is under some kind of a strain, such as crying. On a hot day it shows up more plainly.

E. J. K., Illinois.

Answer.—The best method of treatment for the vascular birth mark, such as you describe, consists in the application of radium. This should be carried out by an experienced skin specialist in order to get the best result.

Running Ear

To the Editor:—My baby had a severe cold two months ago and it left him with a running ear. This condition has been bothering him ever since. Please tell me what to do for it. Baby was 4 months old September 9. C. S., Wyoming.

Answer.—It is not possible to give specific advice as to what is the proper treatment for all cases of running ears since such conditions are by no means always the same. What is proper in one case may not be so in another.

Discharging ears are not at all uncommon, particularly in childhood, when the trouble usually is caused by an ordinary head cold, but not infrequently follows such conditions as scarlet fever and measles. Very often in children the cause of the discharging ears, and especially the persistence of the discharge, is dependent on another disorder—tonsil and adenoid trouble—which may have to be corrected before the ear trouble will subside.

There is still another reason why one cannot give specific directions that will apply to all cases of running ears. This is the fact that the persistence of the discharge may mean the presence of conditions in the ear itself that require something more than ordinary local treatment. We refer to the cases in which there develops some disease of the bone. A situation of this kind is not free from the danger of more or less serious complications.

When there is a condition of discharging ears that has kept up several weeks a regular cleansing of the ear by irrigation at least twice a day with warm boric acid solution is advisable and such treatment cannot be of any harm. Where something more than this is required, it is better to have some one who understands ear diseases see just what the situation is and give the proper advice.

Diet for High Blood Pressure

To the Editor:—Please tell me what diet is necessary for a person with high blood pressure. I am 58 years old and have it slightly.

Mrs. T. J. S., Canada.

Answer.—If a person has a high blood pressure associated with impairment of the kidney, it is advisable to restrict the amount of protein foods, especially meat. It is well also to be sparing in the use of vascular stimulants, such as coffee, tea, and such condiments as mustard, pepper, and strong meat sauces. Soups should not contain extracts of meat. If, however, the blood pressure is only slightly excessive, and there is no kidney disease, the need for such restrictions of protein foods is less urgent.

Pott's Disease

To the Editor:—Will you kindly give me a little information about what is called Pott's Disease, or tuberculosis of the spine? I have always been told that I had infantile paralysis caused from a fall when I was 18 months old, but learned a few months ago that I had tuberculosis of the spine. What caused it in a child so young? Is it in the blood? Could one be born with it and the condition develop later? Or is it a disease of the bones? I would very much appreciate what you could tell me on this subject. V. A., Kansas.

Answer.—Pott's Disease, or tuberculosis of the spine, is a destructive germ disease of the bodies or supporting part of the vertebrae as they are piled one on top of the other to form the spinal column or backbone. It occurs most frequently in children from 3 to 10 years of age.

The destruction of a single spinal bone causes a sharp, definite, angular lump to show on the surface of the back. The destruction of several adjacent vertebrae or spinal bones develops a larger and more rounded hump. The deformity of tuberculosis is practically always directly backward in the middle line, so that no matter how great the hump may be the accompanying deformity of the two sides of the back is symmetrical.

This is important because in so-called curvature of the spine, which is not of tuberculous origin, the hump besides being backward is always noticeably rounded off to the right or left of the middle line and the two sides of the back are quite different in appearance, the side possessing the hump being rounded and convex while the other side is flattened and concave.

The latter condition of curvature of the spine, or scoliosis, may be due to early rickets, prenatal defective development of the skeleton, disease of the chest contents and infantile paralysis. Infantile paralysis as a common cause of lateral curvature is frequently accompanied by lameness due to the same disease affecting the nerves of the leg muscles.

Tuberculosis of the spine is a rare cause of lameness. When severe enough to injure the spinal cord, it usually causes a temporary weakness of the legs followed by complete helplessness and recumbency in bed. Even this may be recovered from and walking be resumed, but there is practically no period of real lameness. Except for joint disease, infantile paralysis is the usual cause of lameness.

Tuberculous infection is not inherited, but is ingested with the food or received through the air passages. It may affect practically any of the tissues or organs of the body.

Diarrhea

To the Editor:—What course should an adult follow to overcome a stubborn case of dysentery of several months' standing. X-ray pictures show no ulcer, but the doctor called it colitis. Bowel movements have a noticeable catarrhal odor, although not much mucus at the present time. Bulky foods cause no improvement; constipating foods do not constipate or change the liquid movements in the least. I became very ill after eating herring (brine) prepared with vinegar and onions. I did not vomit but bloated and had a dull pain in my stomach for a week, followed by dysentery. One doctor prescribed ¼ gr. of emetin hydrochlorid, but I took only three or four tablets as it caused vomiting each time. Would it be advisable to take them anyway, or would it injure my stomach? I am quite weak and have lost 30 pounds in weight. I drink two quarts of milk daily, eat lettuce, carrots, potatoes and not much meat and no fish. I take an enema of warm water each night. C. M., Washington.

Answer.—Diarrhea may be a simple functional disturbance of the bowel with no actual disease present or it may result from a wide variety of more or less serious changes in bowel structure, catarrhal, ulcerative or similar changes. Some knowledge of the underlying cause is essential to proper treatment. Such information can best be gained by examination of the stools, the presence of blood and pus indicating a serious ulcerative condition or growth and mucus alone indicating a catarrhal colitis. Absence of these speaks for a simple diarrhea.

The diet best suited to the latter condition consists of boiled milk toast, soft eggs, custards, broths, cream soups, rice and farina. Lean meats and chicken are usually well borne. No vegetables or fruits should be taken until the stools become formed and then only cautiously. Avoid buttermilk, fruit juices and ices. Rest in bed and hot applications on the abdomen aid greatly. No enemas should be used.

CURRENT HEALTH ITEMS

TOO YOUNG FOR GOLF

Walter Camp thinks a man under forty is too young for golf. He says nothing about the age at which women should take up the game, probably thinking that a woman would rather forego the sport than to admit two score years.

In the *World's Work* for October, the originator of the "daily dozen" expresses the view that men should take their games in cycles, both to get the greatest physical development and recreation out of them and to obtain the greatest mental discipline and character building, especially in youth.

The boy needs the rougher sports and competitive contests to fire his ambition and to destroy any selfishness or resentment toward cooperation or team play, Mr. Camp believes. His majors should be football and baseball rather than golf or tennis

After college the young man has only his week ends for sport, and during these years, Mr. Camp recommends attention to tennis, squash, hand ball and strenuous sports of a combative nature. Only after these games become too strenuous should the man let golf become his chief sport.

"Golf is an ideal game," concludes Mr. Camp, "but it has its limitations at both ends of the scale. In it there is not enough physical exercise for the youth of fifteen to twenty; but if played immoderately by the man of sixty, it is too strenuous.

"The ideal of sport and its perfection consists in playing every game—marbles, tops, baseball, football, tennis and golf, at the time of life designed in nature's scheme of things, enjoying each to the full, and storing up memories of it."

GAMES AT THE COUNTRY SCHOOL

Thousands of country children still troop off each morning to the little one-room frame schoolhouse, there to spend long noon hours and recess periods at unorganized play.

The old practice of drawing a line of demarcation between the girls' side of the school yard and the boys' side still obtains in many places, thus lessening the number of "scraps" between sexes. Most school fights arise when there is nothing else for the children to do except squabble, and the addition of a little playground equipment and some supervision of recreation activities by the teacher will both prevent school ground feuds and aimless, unsatisfying play.

The Iowa State Teachers College in a recent bulletin on "Physical Education for Elementary Schools," lists a number of games suitable for the children of all ages that make up the country school and also the play equipment which every rural school should have as a minimum. Following is a list of the minimal equipment recommended for a one-room rural school:

Six or eight beanbags filled with beans, corn or oats.

One or two playground (14 inch) balls.

One baseball bat.

One volley ball, volley ball net and standards (standards can be home made).

One soccerball or basketball.

One climbing rope (about 1½ inches in diameter).

One chinning bar.

One pair high jumping standards with two or three crossbars (fishing poles).

Pit with take-off board.

Iron hoop attached to schoolhouse 10 feet from ground. This can be used for a basketball goal.

Two large rubber balls (5 inch) for younger children.

One 75 foot tape.

One stop watch (if possible).

Phonograph and five records. The following are suggested as the first five to buy: (1) a good march record; (2) Danish Dance of Greeting, I See You; (3) Shoemaker's Dance, Swedish Clap Dance; (4) Nixie Polka, Chimes of Dunkirk, Kinderpolka; (5) Looby Loo.

WHAT IS HIS SOCIAL AGE?

Once, in the unenlightened past, we reckoned age, simply from the date of birth. Of late, however, we talk much of mental age and physical age, realizing the great differences in physical and mental development that exist between children of the same years.

Now the *American Educational Digest* in its October number discusses tests that a New York educator is devising to establish what may be called the "social age" of a child. This school man points out that while many of the slower school pupils are under the mental age of 12, they still have the knowledge of how to take care of themselves and to get along with their fellows.

On the other hand, the genius with an intelligence quotient of 160 may be in greater need of guidance and care than the so-called feebleminded child of 10.

"It is now generally recognized," says this educational journal, "that the mental age is now more important than the chronological age for school work. The social age may now prove still more valuable. The 'dull normal child' may be made a good citizen and a very useful member of society if his social intelligence is high. On the contrary, a child with a high intelligence and a low social quotient may be a positive danger to any community in which he lives."

BOTTLED SUNSHINE

Science announces that the mystery of why rickets can be cured by so dissimilar treatments as administration of cod liver oil and exposure to sunshine has been cleared up.

Cod liver oil and other substances curative of rickets are bottled sunshine and actually give off ultra-violet light, the same sort of radiation to which the sunlight and the radiations from mercury quartz lamps owe their effectiveness.

Experiments carried on by Prof. I. Newton Kugelmass and Dr. Irvine McQuarrie of Yale University indicate that the curative effects of the antirachitic diet are bound up in some way with the giving off of ultra-violet rays by substances in the food.

All of the food materials they studied, whether they were in themselves curative or not, became capable of affecting photographic plates when they were exposed to the sun. The scientists concluded that the power of giving off ultra-violet rays, and therefore the value in the treatment of rickets, is dependent on oxidation.

The Yale scientists declared: "These experiments point strongly to the common property of emitting ultra-violet rays, of cod liver oil, egg yolk, sperm oil and bile on the one hand and of sunlight or quartz mercury vapor radiation on the other, as the basis for their identical curative action in rickets."

Medical Supervision

S. M. A. is sold only on the order of a doctor, because the best results are obtained for the baby in this way. Babies are not all alike, even though most of them do exceptionally well on S. M. A. Some infants have weaker constitutions than others. This only a physician can determine and understand. Such babies need especially careful direction regarding the amounts of the food to be given, for sometimes a smaller rather than a larger amount of nourishment is more beneficial. But even babies whose constitution is good should be examined once per month by a doctor—for the simple reason that he will recognize much better and sooner than the parent the presence of trouble when it is still slight. Therefore, the doctor should not simply be called to order S. M. A., but the parent should have him return to supervise the development of the baby.

S. M. A. is manufactured by The Laboratory Products Co., Cleveland, Ohio, by permission of The Babies' Dispensary and Hospital of Cleveland.

Samples are sent to physicians only

For infants deprived of breast milk

BE AS CAREFUL AS YOUR DOCTOR

The four things to do

1

Apply iodine from an iodine swab or use half strength tincture of iodine. Do not wash the wound.

2

Apply a dry sterile piece of gauze folded in a convenient pad as soon as iodine has dried.

3

Then wrap this dressing with a sterile gauze bandage and fasten with adhesive plaster.

4

Avoid further irritation or injury. Note additional instructions in Bauer & Black First Aid Book.

A Simple First Aid Lesson

from Bauer & Black

on the protection you need against the infection that often results so seriously

WHENEVER there is a break in the skin, there is danger of infection. Any wound, no matter how slight, offers a lodging place to germs.

That is why your doctor advises you to be careful. To use the same care that he uses in guarding against infection. You must use a *sterile* dressing. That means a *germ-free* dressing.

A Common Mistake

Now, by *germ-free* is meant more than a "clean cloth." One of the greatest mistakes people make is in using a clean handkerchief to bandage a wound.

The cleanest of cloths, not having been scientifically sterilized, may harbor infectious germs, and loss of life may be the result.

* * *

Why take chances? Why invite danger when it is so simple to avoid it?

Any druggist will supply you with the Bauer & Black products needed in this first aid. Order them today. The cost of all is trifling. No home should be without them, no vacation kit, or traveling outfit. Be prepared!

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For 30 years, Bauer & Black have devoted themselves to contributing the best that men know in surgical dressings and allied products. Hence the name Bauer & Black is accepted as a mark of safety and protection, by physicians, surgeons and hospitals the world over.

First Aid Book Free

Send your name and address today for Bauer & Black's complete first aid book. Tells what to do in case of accident, how to meet every emergency, what to do before the doctor comes. Address Bauer & Black, 2500 South Dearborn Street, Chicago.

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